





THE UNIVERSITY  
OF ILLINOIS  
LIBRARY

720.5  
ARN  
V.12

ARCHITECTURAL  
LIBRARY













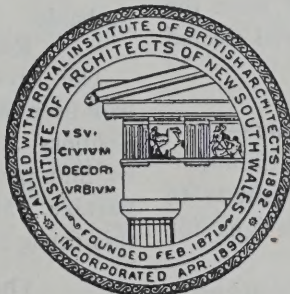






# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



JANUARY 15TH  
1923

VOL 12. No. 1

PRICE ONE SHILLING

Boys SEP 28 '23



# MINUTES OF AN ORDINARY GENERAL MEETING OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Held at 5 Elizabeth Street, Sydney, on Tuesday, 12th December, 1922, at 8 p.m.

## Present.

Mr. G. H. Godsell (President) in the chair, and about forty members.

## Apologies.

Apologies for absence were received from Messrs. A. W. Anderson, A. Lanyon Clark, R. W. Pickering, and A. F. T. Somerville.

## Election.

A ballot was taken for the election of Mr. Robert Newburgh Hickson as a Fellow, and of Mr. Hubert Christian Corlette, F.R.I.B.A., as an Honorary Member. Fifty ballot papers had been received. Messrs. S. H. Buchanan and John Barr (Fellows) were the scrutineers, and both candidates were declared elected unanimously.

## Canberra.

The President made the following statement:—

1. In June, 1914, the Government of the Commonwealth of Australia invited all qualified architects to compete in international competition for designs for Parliament House at Canberra.

2. Intending competitors were required to acknowledge receipt of the programme of competition on a registration form which accompanied the conditions.

3. Some months later it was publicly notified that the competition was postponed, owing to the British Empire being at war.

4. In August, 1916, registered competitors were notified that by direction of the Government the competition had been resumed, but that the date for submission of designs had been fixed at 30th April, 1917, instead of 30th March, 1915, and that the subjects of enemy countries were ineligible.

5. Before the closing date, 30th April, 1917, competitors were notified publicly that the competition had been again suspended until the war was over, so that architects at the front might be given an opportunity to compete on their future home.

6. Notwithstanding the above reasons for the suspension, the Federal Cabinet in January, 1919, decided not to reopen the matter of the question of proceeding with the erection of Parliament House.

Pursuant to the foregoing, the President said that he was now in communication with the Royal Institute of British Architects, and with the Institutes of the Australian States, on the question of entering an action for damages against the Commonwealth Government.

## The British Empire Exhibition of 1924.

The President also spoke on this matter, and said that he had endeavoured to impress Mr. Rodgers (the Minister for Trade and Customs) with the importance of holding a competition among Australian architects for the Australian pavilion. Mr. Rodgers had stated publicly in September last that such a competition was to be arranged, and Mr. E. H. Farrar (the Minister for Labour and Industry) had done his best to keep Mr. Rodgers up to his promise. But in spite of all efforts it had been decided that the Federal Public Works Department should take charge of the work, and a visit of an officer of that department to England was probable.

## Returned Maimed Soldiers' Kiosks.

The President notified members that these kiosks had been handed over to the Limbless and Maimed Soldiers' Association, and that the money guaranteed by him personally for the cost of one of them was payable. Members who had promised subscriptions in this cause should send them in without delay.

## The Annual Meeting and Dinner on 13th February, 1923.

The President stated that the Annual Meeting and Dinner would be held on 13th February, 1923, when the Federal Council of the Australian Institutes of Architects would be distinguished visitors.

## Lecture.

Mr. G. Sydney Jones, F.I.A. (ex-President), then delivered the following lecture on *Books on Architecture*:—

What say some of the master minds of the world concerning books?

Hear Milton, the Scholar: "Books," he says, "are not absolutely dead things, but do contain a potencie of life in them to be as active as that Soul whose progeny they are; nay, they do preserve, as in a violl, the purest efficacie and extraction of that living intellect that bred them."

J. F. Clarke, the Journalist, says: "When I consider what books have done for the world, and what they are doing, how they keep up our hope, awaken new courage and faith, soothe pain, give an ideal life to those whose homes are hard and cold, bind together distant ages and foreign lands, create new worlds of beauty, bring down truths from heaven, I give eternal blessing for this gift."



Charles Lamb, the Essayist, adjures you to "ask a blessing on your books."

Isaiah, the Prophet, tells us to "Inscribe it in a book, that it may be for the time to come for ever and ever."

Oliver Wendell Holmes, the Humanitarian, says: "There are times in which every active mind feels itself above any and all human books."

Every book-lover will agree with the above testimony as to the value of books, though every book collector may not, because he is a lover of externals rather than internals. There are some, however, who claim to be lovers of both externals and internals of all worthy books, and I hope I for one may be counted of that brotherhood who find friends and counsellors, comforters and companions in the world of books.

Now, I do not propose to speak to you as a book collector, for I am not one, chiefly, however, because my pocket has never been well enough filled with the needful; and I have no care, even if I were competent to talk to you of the Elzevirs and Aldines, of Roger Payne, William Morris, and Cobden Sanderson, and other publishers and designers of books. Nor shall I refer to bindings, bookplates, frontispieces, title pages, headpieces, tailpieces, margins, nor stories of book-lovers and book collectors. These are all delightful subjects to the book-lover, and can be studied also delightfully under the leadership of such men as Andrew Lang, Brander Matthews of the Grolier Club, Egerton Castle, and, I am sure, our own Hon. Member, Mr. Ifould.

To introduce the subject on which I wish to briefly address you, I want to tell you that in the hearing of a certain collector of old tomes and rare volumes a remark was made that So-and-so was "*said to know something about books*," which brought forth the rejoinder, "*He knows about books? Nothing, nothing at all, I assure you; unless, perhaps, about their insides.*"

It is about the insides of books I want to talk, the insides of *Books on Architecture*. I do not, however, wish to describe such books, nor to criticise them, if I were able or had the time to do so, for I should weary you and fail to achieve my object, which is briefly to put a few thoughts to you as to the *architectural value of books on Architecture*.

Look back some centuries and you will easily imagine how delighted were the architects and connoisseurs of that time to turn the pages of the books of Palladio and Vignola, for they were about the earliest architectural publications of any value. Since then books on Architecture have sprung up and grown apace, until to-day their name is legion and their number uncountable, and the sumptuous folio, with its colotype plates and accurate drawings of buildings has become a common thing.

I ask myself—and I want you to ask yourselves—has this almost overplus, one may call it, of publications on Architecture a good or a bad influence on architectural design? It requires some hard thinking to answer this question, and I for one have not yet ceased thinking about it. If the humanist movement of the Renaissance did nothing else, it most certainly developed the historic sense, and nearly all books on Architecture are the issue of that historic sense. Now, I yield to none in my love of the historic (the origin of which, by the way, is pride of ancestry), but I am inclined to think that it has led to a greater value being placed on things of the past than is their appropriate due by those of us who live in the present. It is an advance in knowledge to discover what was done in the past, and how it was done, but if the influence of that knowledge upon the present is so great that the sense of relative value is lost, and the possibility of advance on lines of modern thought is prevented, or at least impeded, surely it may not be well to be so strongly impressed by this historic sense. I admit that we are largely creatures of our environment, and that continuity of mental growth must be part of our existence, but I think also that we are somewhat mentally dulled by these conditions, and that it would be better if, as architects, we took hold of ourselves and shook ourselves up a little. Books, I think, are to a great extent responsible for this semi-dormant condition, shall I call it? As a book-lover, I am sorry to express these opinions, but I fear it is the truth concerning the influence of books on Architecture, if not of books in general.

Which are the books that have been chiefly responsible for this influence on the architecture of the British people? I think they are the following:—

1. Andrea Palladio's four volumes in folio.
2. Sir William Chambers' *Treatise on the Decorative Part of Civil Architecture*.
3. James Stuart and Nicholas Revett's *Antiquities of Athens*.

The kind of book on Architecture which, to my mind, is of the greatest value is the monograph. Such a book, for example, as:—

1. *The Paris Opera House*, by Ch. Garnier; or
2. *S. Sophia, Constantinople*, by Lethaby and Swainson; or
3. *The London County Council Hall*, drawings submitted in competition; or
4. *Westminster Abbey and the King's Craftsmen*, by W. R. Lethaby; or
5. *Westminster Cathedral and Its Architect*, by Bentley's daughter.

All of these five examples differ in method of portrayal, yet all are monographs. The history of design



may be briefly defined as "how and why certain forms have been evolved," and the monograph, I think, more clearly than any other method explains this as applied to a particular building. Garnier shows by a series of fine plates how he conceived his building, and the resulting effect. Lethaby and Swainson deal generally with the history of the building of the greatest church in the world, and describe in detail all parts of the structure and its decoration, so that those who have never been in Constantinople find no difficulty in mentally watching its erection, and incidentally obtaining a deeper insight into the why and wherefore of Byzantine building than by studying hundreds of photographs of different buildings said to be Byzantine in style. The volume of drawings submitted in competition for the London County Council Buildings by various architects shows how different minds attacked an attempt to solve a particular problem—in the comparison of design with design lies the value to the reader. The building of Westminster Abbey and the work of the King's Craftsmen, as described by Lethaby, is so impelling that one imagines one is an onlooker at the building of the old shrine. In *Westminster Cathedral and its Architect* the sympathetic hand of a lady author introduces the personal and biographical into the monograph, which makes the reader think that he is building the Cathedral with Bentley.

Each of the above, in my opinion, is the kind of monograph which visualises for the reader the manner and method of the architect's conception of the resulting effect. The more of such monographs the better, because I think they give us a deeper insight into the manner of creation of the architecture of past generations and a truer idea of the working of the mind of some of the architects of our own times.

There is another class of book which possesses an architectural value of no mean kind. I refer to the more or less philosophical books on architecture, such as Ruskin's *Essays on Architecture*, Anderson and Hebrard's *Scheme for an International World Centre*, and the *Works of Man*, by March Phillips, and that gifted Frenchman, Cesar Daly's *Hautes Etudes*. These and other works of a like kind are valuable because they make men think. They are broad in outlook, and they take into account the essentials—the democratic essentials—of Architecture, the things that matter. It is not necessary for me to mention what these essentials are, because I take it that any man who knows architecture when he sees it—I assume that everyone here present does—is cognisant of them. I must also mention in this connection Lethaby's *Architecture, Mysticism, and Myth*, and E. P. Evans's *Animal Symbolism in Ecclesiastical*

*Architecture*, Balfour's *Evolution of Ornament*, and Viollet le Duc's *Lectures on Architecture*.

Another class of publication, which may not be considered a book, although in one sense it is, *viz.*, *The Architectural Journal*, has a very distinct value. Although primarily a publication for the record of present doings in Architecture, its influence is extensive, because, like the surveyor, it is ubiquitous—it has been, or is, everywhere. But its architectural value is doubtful. True, it is the means by which the architectural thought of the day in all countries is distributed throughout the world, and for this reason it is valuable, but it is very much in the hands of the Editor to control as he may or may not have the ability so to do. If, for instance, the Editor desires to push a certain tradition, even to death, he has the power of the Press, and can do it. It is architecturally not a good thing that the professed architect should allow himself to be led too easily by the architectural journal. I have known men—so-called architects—who have looked through such journals and picked out this or that design and reproduced it, almost *in toto*, with, of course, their own variations! That is what architectural journalism tends to do for Architecture if not controlled.

Draughtmanship has a very marked influence on architectural design. Every architect worthy of the name, with a very few exceptions, is a draughtsman, because he is a creator. Draughtmanship is the architect's medium of creation; without it he could hardly convey his ideas to his fellow-men. Therefore books on draughtmanship have, I think, a distinct architectural value, a value all their own, because it is a personal value. There can be no doubt that the less gifted draughtsman copies (let us say unconsciously!) the style of the brilliant draughtsman, and this reacts upon his powers of design, the result in some cases being that architectural design is more or less influenced by the designs of brilliant draughtsmen, even though those designs are not necessarily good. I am afraid every one of us is rather prone to appreciate draughtmanship above its true value, because we build so much on paper, whereas if we were to build through the medium of the model the value of our architecture would be greater.

Biographies of architects have also, to my mind, an architectural value. I do not mean books such as Militzia's *Lives of Architects*, which consists of very little more than short paragraphs concerning each man, but rather books such as the *Life of Michael Angelo Buonarrotti*, by John Addington Symonds, or *George Edmund Street*, by his son, or *Sir Charles Barry*, by his son, or the monograph on Charles Follin McKim, and others that will occur to you. Such books, in



addition to giving the reader an insight into the methods of the subject, open up the heart of the architect whose life is under review, and set up a note of sympathy and admiration, which, I think, has its effect upon the architectural being and power of design of the reader.

Finally, books are of immense value to an architect. Without their aid he could hardly become an architect, but with their aid he is able to view, as in a mirror, the past, and to see visions and dream dreams of the beauty of the architecture of the future. For the present his work may be uninteresting, but by the influence of books it may be lifted out of the commonplace into the realms of things that last for ever.

#### Discussion.

A discussion followed, in which Professor Wilkin-

son, Messrs, B. J. Waterhouse, G. S. Keesing, J. J. Copeman, and R. Keith Harris took part.

The President (Mr. G. H. Godsell) thanked Mr. G. Sydney Jones for his valuable lecture, and said that a copy of it would be kept in the Institute's Library for the use of students. He conveyed a vote of thanks to the lecturer, which was carried by acclamation.

### COMPETITIONS

COMPETITION.	CLOSING DATE.	REMARKS.
N. S. War Memorial ...	—	Approved.
Port Said Memorial ...	31/3/23	Approved
Queen Victoria Buildings	28/2/23	Approved
Victorian National Memoriam	30/6/23	Approved

## INSTITUTE LIBRARY

#### *Library Rules for Borrowers.*

1. If a book is lost or stolen from a borrower, or if the same is not returned by him within fourteen days, from the date of issue, he shall replace it, or pay to the Council the full value of such book. In case of the book being part of a set or series, and the borrower neglecting to return the same within fourteen days as aforesaid, or being unable to replace the same, in consequence of its having been lost or stolen, he shall pay to the Council the full value of the whole set or series.

2. A borrower shall keep the books borrowed by him from the Library clean and in good condition, and

shall not tear, nor turn down the leaves, nor mark, nor deface, damage, or injure the book in any way.

3. If a book is torn, damaged, marked, defaced, or injured while lent to a borrower, such borrower shall, within one week of notification from the Council, replace the book, or pay to the Council the full value of the book; or, in case it is part of a set or series, and he shall not replace the said book, the full value of the whole set or series.

In cases where the book is replaced the borrower shall be entitled to the injured book.

4. A borrower shall be entitled to borrow only one book at a time, but at the discretion of the Council two volumes of one work may be issued at the same time.

5. A borrower shall return any book borrowed at the latest within fourteen days after the date of issue; but books may be renewed upon application at the discretion of the Council.

6. If a book is not returned within the time prescribed by the preceding rule, the borrower shall pay the sum of sixpence for each and every day the book is retained beyond the prescribed time.

7. Certain volumes may not be removed from the Library, and are for reference only.

### THE COMMON ROOM.

The COMMON ROOM at the INSTITUTE OF ARCHITECTS is available for Arbitrations, Consultations and the like.

*Terms on application to the Secretary.*



# INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

## The Council's Report for year ending 31st December, 1922.

The Council presents the following report of its activities for the past twelve months:—

### Roll of Members.

There are on the Roll one Life Fellow, 109 Fellows, 138 Associates, 13 Honorary Members and 3 Students.

### General Meetings.

The General Meetings held and their special features were:—

February.—Lecture by Mr. Varney Parkes, F.I.A.

"The History of Rocks and Process of Formation."

March.—Annual Meeting. Election of President and Council.

April.—Lecture by Mr. S. V. Rowe, "Furniture and Decoratoin."

May.—Lecture by Mr. F. A. Ogden, "The Influence of the Architect in Fire Risk Improvement."

June.—President's Evening. Presidential Address.

July.—Lecture by Mr. R. Race Lewis on "Sydney Expansion Scheme and Warragamba Irrigation Scheme." Special re Martin Place Extension.

August.—Confirmatory Special re last. Lecture by Mr. V. B. Trapp, "Australian Timbers."

September.—Lecture by Mr. W. W. Froggatt, "Timber Borers."

October.—Lecture by Mr. S. M. Mould, F.I.A., "The Attitude of the Institute in relation to Architectural Education." Official opening of the new premises.

November.—Lecture by Mr. J. F. Munnings, A.R.I.B.A., "Architecture in India," and a paper by Mr. L. C. McCredie, A.I.A., "Draughtsmanship."

December.—Lecture, "Books on Architecture," by Mr. G. Sydney Jones, F.I.A.

### Council Meetings.

Thirty meetings have been held, and a great volume of business has been transacted. The attendances of the members were as under:—

Mr. G. H. Godsell, President . . . . . 24

Mr. G. Sydney Jones, Ex-President . . . . . 19

Mr. B. J. Waterhouse, Vice-President	28
Mr. R. W. Pickering, Hon. Secretary	8
Mr. H. C. Day, Hon. Asst. Secretary	26
Mr. D. T. Morrow, Hon. Treasurer	12
Mr. J. S. Adam, Councillor	21
Mr. F. Glynn-Gilling, Councillor	18
Mr. S. M. Mould, Councillor	21
Mr. H. V. Vernon, Councillor	11
Professor Leslie Wilkinson, Councillor	21
Mr. R. Keith Harris, Councillor	23
Mr. L. C. McCredie (Councillor), granted three months' leave on 6/12/21	17

### Committees.

The following Committees have been sitting during the term, and have been zealous in their respective spheres. The Institute is greatly indebted to them for so much good work:—

Practice Committee.

Education and Examination Committee.

General Purposes and House Committee.

Exhibition Committee.

Journal Committee.

Town Planning, Housing and Competition Committee.

Finance Committee.

A.I.F. Memorial Committee.

Timber Supply Committee.

By resolution of the Council on 22nd August, 1922, a Committee came into existence with a view to advise regarding the Borer in Timber and upon the classification, standardisation and seasoning of timber. This Committee has now practically decided upon what action should be framed to prevent the infestation of all Commercial Timbers and also what remedies should be employed to destroy the insects.

### The President's Hospitality.

The President has continued his policy of endeavouring to get the Members together in social intercourse throughout his second year of office, and he has entertained them at General Meetings, Council Meetings and Committee Meetings on very many occasions.

### The Architects' Act.

The Architects' Act passed through Parliament on November 15, 1921, was assented to on November 28, and the members of the first Board were gazetted



on January 27, 1922. The Act came into force on August 1st, 1922, and the period of six months during which existing Architects must register will expire on 31st January, 1923. Thereafter admission to the Profession in New South Wales will be gained only by passing an examination equivalent to R.I.B.A. Final.

### **The Exhibition.**

The Second Annual Exhibition since the War was opened by the President, Mr. G. H. Godsell, on Thursday, 30th March, 1922, in the Education Department's Art Gallery. It was a fine exhibition whose standard was higher than the exhibitions of past years and created an active and intelligent interest in the Art of Architecture.

### **Federal Council A.I.A.**

Mr. Godsell, as President of this Council, and Mr. Waterhouse, as its Hon. Treasurer and Hon. Secretary, have been untiring in their efforts to secure recognition for Australian Architects from the Federal Government, but small success has rewarded them.

**As to Canberra,** the President wrote an article which appeared in the press throughout Australia on 21st June, 1922, and in *Architecture* in the issue of August, 1922, which clearly set out the position at that time. Since then the R.I.B.A. has written as follows:

"I am in receipt of your letter dated 25th August, which I have submitted to the Competitions Committee of the Royal Institute, together with the enclosures and the statements in *Architecture* in connection with the attitude of the Federal Government towards the employment of private Architects in the erection of buildings at the Australian Federal Capital.

"The position which has arisen owing to the unwillingness of the Federal Government to give Architects in private practice an opportunity of participating in this important work was very carefully considered by my Committee. As a result of the discussion I am directed to inform the Federal Council of the Australian Institutes of Architects that the Royal Institute strongly condemn the attitude of the Federal Government in attempting to treat the building of the Federal Capital as a Departmental affair. The Royal Institute realise that while the projected buildings will only be used temporarily as Government buildings, they will nevertheless be permanent structures, and the Royal Institute consider that Australian Architects in private practice will be unfairly treated if they are not allowed to participate in the preparation of designs for these buildings, whether by means of open competitions or otherwise, as well as for those intended for the more permanent use of the Government.

"The Federal Government will remember that its competition for the Parliament buildings was postponed during the War, after many Architects had spent a good deal of time on the preparation of preliminary studies, at least, in connection therewith. The present action of the Federal Government is considered to be quite contrary to the spirit of its promises to Architects when this competition was postponed. The R.I.B.A. trust that it is not now too late for the Federal Government to reconsider its decision with a view to giving Architects in private practice an opportunity to carry out the buildings contemplated."

The position at this date is that the President is in communication with R.I.B.A. and the several Institutes of Australia to ascertain if joint action can be taken at law against the Federal Government for damages.

### **Again, as to the British Empire Exhibition, 1924.**

Mr. Godsell and Mr. Waterhouse have vainly sought to secure a competition among Australian Architects for the Australian Pavilion at this Exhibition. The Minister for Trade and Customs promised that a competition should be held; but he failed to keep his word, and in spite of the strongest efforts of the State Minister for Labour and Industry an officer of the Federal Public Works Department is to visit England to supervise the erection of a building designed by that Department. And this in the face of an announcement made by the Minister for Trade and Customs at a dinner on 7th August, 1922, that "an All Australian Competition would be held among the Architects of the Commonwealth for the design of the Australian Pavilion at the Empire Exhibition, and that the Federal Council would be consulted in regard to the drawing up of the conditions of competition and that the matter had just been settled by Cabinet."

### **The Federal Council's Bronze Medal Competition.**

This Competition for 1921 was won by Mr. J. D. Scarborough, with Mr. W. H. Eales in second place.

### **Examinations.**

The following candidates passed the R.I.B.A. Special War Examination held in Sydney in February-March, 1922:—Messrs. J. C. R. Mills, H. E. Phillips and L. B. Phillips. Also Mr. F. L. Hodgson passed the R.I.B.A. Intermediate and Mr. A. L. Stafford the I.A.N.S.W. examination qualifying for candidature as Associate.

It is notified that the examination qualifying for candidature as Associate to this Institute in 1924 and thereafter will be the equivalent of the R.I.B.A. final and that registration firstly as probationer and secondly as Student (by passing the Intermediate) will be necessary preliminaries.



### Martin Place Extension.

The Council of this Institute held, when the agitation for the extension of Martin Place to Macquarie Street was at its height, that it was undesirable to extend that Place beyond Castlereagh Street, because such extension would not be of sufficient practical value nor of sufficient aesthetic advantage to warrant the undertaking—but while deprecating the extension, the Council recommended that steps should be taken either by resumption or regulation to ensure that the building or buildings facing Martin Place should be so designed as to afford an axially symmetrical and fitting termination to that street.

A General Meeting of the Institute held on 14th July, 1922, differed from the Council and carried the following by 28 votes to 19:—

“That this Institute approves of the extension of Martin Place and that it asks the Savings Bank Commissioners to give some consideration in return for the corner site which they will have by the extension.”

A confirmatory general meeting on 2nd August, 1922, upheld the Institute's decision by 49 votes to 46 against the Council.

The extension has not, however, yet been undertaken.

### The A.I.F. Memorial.

This Council is of opinion that the best scheme for this Memorial would be, *Firstly*, to acquire Macquarie's Hyde Park Barracks and to so alter the building as to transform it into a Memorial Hall with administrative offices. *Secondly*, to form two wide thoroughfares through Hyde Park, from Macquarie Street to Park Street and from Elizabeth Street to College Street respectively with an Obelisk at the intersection set in architectural surroundings.

The President of the R.S.S.L. of Australia (N.S.W. Branch) is in accord with the Council as to the matter; but legislation has not yet been enacted which will enable the Trustees to adopt the above or any other scheme.

### Competitions.

The attention of Municipal and Shire Councils is being called to the Institute's Regulations for Architectural Competitions by means of printed post cards, which are posted to them twice annually. In several instances copies of the Regulations have been applied for.

Many competitions have been dealt with by the Town Planning, Housing and Competition Committee; for example, those at Parramatta, Parkes, Liverpool,

Lismore and Petersham. In the case of Lismore, members were advised that they must not compete as the conditions were unsatisfactory.

The Council of this Institute was consulted on the conditions governing the competition for alterations to Queen Victoria Building, designs for which are now called, and the Federal Council was similarly consulted regarding the Victorian National War Memorial Competition, which also is now advertised.

### Street Kiosks for Returned Maimed Soldiers.

For a considerable time a movement, which had its origin in a suggestion by the Lord Mayor, has been on foot for the dual purpose of removing flower stands from Martin Place and replacing them with kiosks of ornamental and uniform design and of obviating the necessity of limbless men becoming mendicant musicians by placing them in suitable employment. One of these kiosks has been presented by this Institute at a cost of about £120.

### The Sydney Regional Plan Convention.

A conference composed of members of the Institute of Architects, Institution of Engineers, Institution of Surveyors and Town Planning Association with the Lord Mayor (Alderman W. P. McElhone) as Chairman has been sitting for some months with the objective of procuring for Sydney a comprehensive and long-sighted plan of City Development. This conference made its scheme public at a dinner held at the Australia Hotel on Wednesday, 29th November, when the Lord Mayor presided and His Excellency the Governor, with the State Treasurer, the Chief Justice and many prominent citizens attended. Those who were present formed themselves into the Sydney Regional Plan Convention, with power to add, for the purpose of securing for the city and environs a comprehensive plan of development. And the Convention elected a powerful executive with authority to frame and adopt a Constitution.

### New Premises.

The Institute is now housed in comfortable quarters on the upper floor of the Royal Society's House, which the Council has agreed to lease at a rental of £200 per annum, as authorised by the general meeting of Tuesday, 8th November, 1921.

These new premises comprise three rooms, respectively 34 ft. x 15 ft. 3 in., 16 ft. x 15 ft. 6 in., and 16 ft. x 8 ft., which afford accommodation for the Secretary and his assistant, for Library, members' rendezvous, for ordinary meetings, and facilities for country members.

The President (Mr. G. H. Godsell) officially opened the new premises on Tuesday, 17th October.



**The Library.**

The following additions were made during the year:—

*The Designers of Our Buildings* (L. Cope Cornford).

*History of Architecture* (Sir Banister Fletcher).

*Sound Proof Partitions* (University of Illinois).

*Genesis and Development of Reinforced Concrete in Australia* (Mitchell).

*St. Mary of the Angels* (Clere & Williams).

*The Darling Building at Adelaide University* (Bagot).

*Sydney Improvement Board* (Report and Maps).

*Houses and Gardens* (Lutgens).

*Gothic Architecture of the Middle Ages.*

*Cottage Architecture* (S. H. Brooks).

*Pictorial Architecture of Greece and Italy* (S. H. Brooks).

*Principles of Ornamental Art* (F. E. Hulme).

*Portrait of F. H. Greenway.*

*What of the City* (W. D. Moody).

*Report of the Royal Commission on Greater Sydney* (1913).

*Journal of the Concrete Institute.*

*Sydney Technical College Handbook.*

*Cape Institute of Architects' Year Book.*

*Adelaide School of Mines and Industry Annual Report.*

*Berks, Bucks and Oxon Architectural Association Year Book.*

The thanks of the Council were tendered to various donors.

In addition to the above a complete set of the *Journal* has been bound for record purposes.

Periodicals and Exchanges were received as under:—

*The Builder, Journal of the R.I.B.A., Journal of the Architectural Association, Architect, Builder and Engineer (Capetown), Town Planning Review Liverpool University, Building (Journal of Association of Transvaal Architects and Natal Institute of Architects), Journal of the Society of Architects, Journal of the R.V.I.A., Journal of the American Institute of Architects, Journal of the Japanese Institute of Architects.*

**Institute Endowment Fund.**

By resolution of the Council on 9th February, 1922, an Endowment Fund was established, which now stands at credit £36/4/6.

**Pritchard Endowment Fund.**

By resolution of the Council on 9th February, 1922, an Endowment Fund was initiated for the purpose of paying the expenses of educating the son of the late Mr. A. F. Pritchard. The Committee in charge comprises representatives both of the Institute and of the Master Builders' Association, and Mr. B. J. Waterhouse is the Hon. Treasurer. Members of the Institute and Association still have opportunity to contribute.

**Scale of Charges.**

The Institute's scale has been revised, and was published in the November issue of *Architecture*. Before its adoption by this Institute it is to be submitted to the Federal Council, so that there may be one uniform code for the whole of Australia.

**Cricket Match.**

The annual cricket match with the Master Builders' Association was played on 8th March, 1922, and was won by the Architects by 212 runs on the first innings.

**Bank Credits.**

At 31st December, 1922, the Bank Credits were:—

Current Account	..	..	£474	6	4
Trust Account	..	..	£70	18	10
Endowment Account	..	..	£36	4	6
Kiosk Account	..	..	£22	16	0

**Conclusion.**

After two years of strenuous effort as President, Mr. G. H. Godsell is now leaving the chair. He asks that every member will give his serious attention to the affairs of the Institute, and that everyone will do something to show his interest in an Institution which has been so helpful to the profession generally.

Dated 1st January, 1923.

G. H. GODSELL, *President.*

JOHN J. LOUGH, *Secretary.*



# THE POWDER-POST BEETLE AND ITS PARASITE.

W. W. FROGGATT, F.L.S., Government Entomologist.

The members of the family *Cioidæ*, to which the powder-post beetle (*Lyctus brunneus*) belongs, are all small insects with short antennæ, the terminal joints of which thicken to a club. They have short feet composed of four joints, middle and hind pair of legs with coxæ small and oval, and flexible abdominal segments. The larvæ are small, semi-transparent, slightly hairy grubs. The eggs are deposited in the sapwood of dead timber, or in fungi growing upon decaying timber. The typical genus *Cis* contains over a hundred species of tiny oval beetles breeding in fungi, and one of these, *Cis boleti*, is found all over Europe. Out of forty-two species of this family described from Hawaii, according to Perkins, twenty-nine belong to this genus, and are chiefly collected in the large fungi growing externally on trees or on dead bark, under which there are usually many small fungus growths.

The family is poorly represented in Australia. In Gemminger and Deharold's great "Catalogue of the Coleoptera," published in 1869, no species is recorded from Australia, and in Masters' "Catalogue of the Described Coleoptera of Australia" only one—our common powder-post beetle—is listed.

The members of the genus *Lyctus* differ considerably in general form from the fungus-infesting species, being elongate, flattened on the dorsal surface, with the thorax larger and squarer, and the divisions between the abdomen, thorax and head well defined. The adult beetles vary in colour from black to reddish-brown, most of them being about 3-16ths of an inch long.

## Timber Infested at an Early Stage.

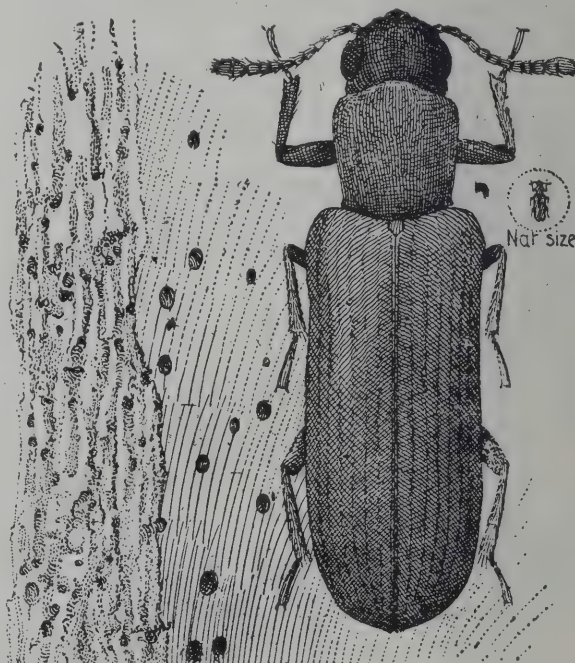
The female probably deposits her eggs in the outer surface or sapwood when the tree has been cut down and the bark is drying. This may happen in the forest if the logs remain there for any length of time, or when exposed in the mill yard. There is no question that the eggs or young larvæ are in the sapwood when the timber is sawn up and used for building purposes, though usually there is no evidence of their presence until about twelve months after the house has been erected. Then the householder notices little dabs of wood dust on the floor. If the boards along the skirting or wainscote are infested, these heaps will be very noticeable, and the little pinholes from which the wood-dust has fallen will be well defined. Sometimes this will end in a year, and there will be no further damage, the adult beetles emerging through the pinhole and dying outside. At other times generation after genera-

tion of active grubs are hatched out of eggs, evidently deposited by the adult females before they emerge from the infested timber or furniture, and after a series of years the infested wood is simply reduced to a mass of wood-dust, held together by an outer thin skin of wood perforated with fine holes. The larvæ of these beetles may be found in the timber in any part of a house where unseasoned wood (or sapwood) has been worked up in both soft or hard woods.

It is not uncommon to find them in furniture, and they frequently feed on the rattan and cane chairs, etc., imported from the East, reinfesting it for years until the whole structure is reduced to a shell, and finally falls to pieces.

## A Voracious Pest.

When sapwood has been used in making furniture, the entire piece is stained and varnished to a uniform tint, but on turning it upside down, one may often find the band of light-coloured sapwood riddled with fine pinholes, caused by the presence of these beetles.



The Powder-Post Beetle  
(*Lyctus brunneus*)  
Also some damaged woodwork.

Large numbers of the wooden handles of picks, hammers, and axes are often found by storekeepers to be wasting away to dust, being often so far gone that there is nothing to be done but to remove and burn them.



In most cases the adult beetles die when they emerge from the infested wood, but they have sometimes been found boring into new timber upon which they have flown or fallen. Borers were discovered at the great hall of the Fisher Library at the Sydney University soon after it was finished, and some fell on the varnished reading-desks below and bored their way into them. In this instance the powder-post beetles died out without doing any serious damage. In a large bonded store in Sydney, where the large beams under the floor were rounded joists, the outer sapwood began to fall away in flakes, and the owners found the beetles on the floors. When, at our suggestion, the sapwood was adzed away, and the rest treated with crude oil, the damage did not extend into the remaining timber.

### Range and Description of the Beetle.

Among the members of the genus *Lyctus* that have been recorded as powder-post beetles, *Lyctus unipunctatus* is stated to be the most common and destructive species in the United States. *Lyctus striatus*, another North American beetle, did considerable damage to the red oak floors of Michigan College, while *Lyctus opaculus* bores into the stems and canes of the grape vines in some parts of the United States.

Though our powder-post beetle (*Lyctus brunneus*) was described at a very early date from specimens in England, and again under the synonyms of *L. coby-*

tributed a note as follows: "In the year 1862, on a small log of wood with the bark on, imported into the London Docks from Swan River as a sample, I found five beetles of a species which has recently been identified as *Lyctus brunneus* by Dr. Sharp, who informs me that he has specimens of it from New Zealand, Britain and France, and it is recorded from Woodlark Island."

This beetle probably has a very wide range over the East, and has been casually introduced in most of these outside countries in timber or furniture. It may not even be a native of Australia, though it is well established here at the present time. It may be described as follows:—

General colour reddish-brown, sometimes dark brown; general form elongate, with the divisions between the head, thorax, and body well defined. Head not as broad as the thorax; jaws stout, turned down; eyes large, rounded, and projecting from the sides of the head; antennæ with the terminal joints forming a club. The thorax is rather flattened on the dorsal surface, a little more long than broad, rounded on both the hind and front margins, and with sides straight, but sloping slightly to the hind margin, the whole surface being finely granulated. The wing covers are long and narrow, their front margin straight with tips rounded, and the surface finely granulated with fine parallel striae. The hind pair of wings is well developed, for this little beetle can fly well. The legs are long, with slender tibiae and long tarsi. Length, 1-6th of an inch.

### A Parasite on the Powder-post Beetle.

There has been no record, as far as the writer knows, of a parasite attacking or checking the increase of this very serious wood-destroying beetle; but early in 1919 a badly infested board of "blue fig" was sent to this office from Southern Queensland. It was full of fine pin-holes from which powdered wood-dust was falling. The board remained under observation for several months, when several adult beetles emerged, which proved to be the well-known *Lyctus brunneus*. The beetles first appeared on the surface of the board in May, and it was toward the end of the month, while collecting specimens of them, that their hymenopterous parasite was first noticed coming out of the holes in the board.

This Braconid wasp measures 4 mm. in length. The head is reddish-brown, and the antennæ (except the basal joints, which are reddish-brown), eyes, and area round the ocelli black. The dorsal surface of the thorax, the abdomen, and ovipositor are black, with a slight reddish-brown mottle on the thorax in some specimens, and the undersurface lighter coloured. The legs are a yellowish-brown, wings hyaline, and the costal nervure and stigma black, with inner veins of a lighter colour.



Braconid parasite of the Powder-Post Beetle.

*dioides* Dejean, and *L. glycyrrhizæ* Cheverole, from specimens in France, and from Woodlark Island by Montrozier under the name of *Lyctus rugulosus*, it was not until 1876 that it was recorded and identified from Australia. In a note in the *Entomologist's Monthly Magazine* of that year, J. W. Douglas con-



# MEMBERS OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

31st DECEMBER, 1922

## *Life Fellow.*

Jones, G. Sydney, A.R.I.B.A., 113 Pitt Street, Sydney.

## *Fellows (F.I.A.)*

\*Adam, J. S., Mutual Life Buildings, Wynyard Street, Sydney.

Allen, Alfred,

Alsop, Rodney H., F.R.I.B.A., 352 Collins Street, Melbourne, Victoria.

Anderson, A. W., 7 Bridge Street, Sydney.

Barr, John, A.R.I.B.A., Gordon Road, Lindfield.

Barlow, Jno., Bishop's Avenue, Randwick.

Blair, G. MacLeish, Govt. Architect's Branch, Dept of Public Works, Sydney.

Bridekirk, C. E., Duntroon Street, Hurlstone Park.

Brodrick, R. H., Town Hall, Sydney.

Buchanan, S. H., 26 Hunter Street, Sydney.

Campbell, J., 18 Enmore Road, Newtown.

Campbell, James Ernest, 42 Alt Street, Ashfield.

Craig, R. G., 1 Belgrave Street, Waverley.

Chambers, C. W., Holt's Chambers, 121 Pitt Street, Sydney.

Clamp, J. Burcham, 122 Pitt Street, Sydney.

Copeman, J. J., 72b King Street, Sydney.

Cosh, Thomas Frame, 16 Spring Street, Sydney.

Day, H. C., 3 Spring Street, Sydney.

Denning, Geo., 20 Bridge Street, Sydney.

De Putron, Wm., 17 Martin Place, Sydney.

Dunstan, Jno., 61 Market Street, Sydney.

Durrell, G. W., 14 Castlereagh Street, Sydney.

Esplin, D., 85 Pitt Street, Sydney.

Fairfax, C. E., Bown's Road, Kogarah.

Foggitt, W. H., c/o Housing Board, Grosvenor Street, Sydney.

Ford, B. W., Chamber of Commerce Buildings, George and Grosvenor Streets. 'Phone 409.

Gardiner-Garden, H. McB., Govt. Architects' Branch, Dept. of Public Works, Sydney.

Gilling, F. Glynn, Twyford House, 17 Castlereagh Street.

Godsell, G. H., 14 Martin Place, Sydney.

Grant, G. L., 19a Elizabeth Street, Sydney.

Hadley, B., Lecturer-in-Charge, Dept. of Architecture, Technical College, Harris Street, Ultimo.

Halligan, M. B., Equitable Building, George Street, Sydney.

Hennessy, John F., 247 George Street, Sydney.

Hennessy, Jack F., B.Sc.A., 247 George Street, Sydney.

\*Hodges, H. T., 350 George Street, Sydney.

Hodgson, T. W., 28 Martin Place, Sydney.

Hunt, Walter, Townsville, Queensland.

Jackson, H. O., Sydney Harbour Trust.

Joseland, H., Twyford House, 17 Castlereagh Street, Sydney.

Justelius, J. E., 49 Castlereagh Street, Sydney.

Kent, H. C., F.R.I.B.A., 58 Pitt Street, Sydney.

Kenwood, W., Post Office Chambers, Pitt Street, Sydney.

Kethel, J. A., 58 Pitt Street, Sydney.

Lake, J. W. H., 17 Bligh Street, Sydney.

Lamrock, W., Council Chambers, Drummoyne

Lindsay-Thompson, E., Sydney Arcade, King Street, Sydney.

Lodge, E. H. E., 15 Benelong Street., W. Neutral Bay.

Louat, Rutledge, 375 George Street, Sydney.

Macqueen, A., 8 Spring Street, Sydney.

Marks, T. J., 14 Martin Place, Sydney.

McCredie, A. L., 7 Bridge Street, Sydney.

McCarthy, J. T., Challis House, Martin Place, Sydney.

McDonald, Allan, Temora.

McRae, Geo., Government Architect's Office, Phillip Street, City.

Merriman, J. H., Town Hall, Sydney.

Merewether, E. R. H., Bolton Street, Newcastle.

Minnett, R. V., 12 Loftus Street, Sydney.

Monks, William John, Wagga Wagga.

Moorhouse, F., 105 Pitt Street, Sydney.

Morris, Howell Price, Lett Street, Lithgow.

Morrow, D. T., 17 Martin Place, Sydney.

Mould, S. M., A.R.I.B.A., 85 Pitt Street, Sydney.

Nangle, J., F.R.A.S., Superintendent Technical College, Sydney.

Newman, W., 3 Spring Street, Sydney.

Newton, J., 4 Gouldsbury Street, Mosman.

Nixon, W. M., 163 Pitt Street, Sydney.

Oakeshott, G. J., Commonwealth Dept. Works & Railways, Customs House, Sydney.

O'Connor, J. F., Inverell.

Parkes, Varney, 1 Castlereagh Street, Sydney.

\*Peddle, Jas., 226a George Street, Sydney.

Pender, Walter Harold, 18 Elgin Street, West Maitland.

Pickering, R. W., Union House, George Street, Sydney.

Pitt, N. B., Bolton Street, Newcastle.

Power, Joseph Porter, B.N.Z. Chambers, Wynyard Street, Sydney.

The asterisk (\*) denotes a Licentiate R.I.B.A.



Purdue, Archibald John, Govt. Architect's Branch, Dept. of Public Works, Sydney.

Ramsay, L. L., 113 Pitt Street, Sydney.

Ranclaud, P. E., 15 Castlereagh Street, Sydney.

Reeves, Dawson, 6 Boyle Street, Mosman.

Reid, John, 350 George Street, Sydney.

Roberts, George A., 76 Pitt Street, Sydney.

Rosenthal, Sir Charles, F.R.I.B.A., K.C.B., C.M.G., 8a Castlereagh Street.

Ross, H. E., Equitable Building, 350 George Street, Sydney.

Rostron, W. A., Somerset House, 9 Martin Place, Sydney.

Rowlinson, E. O. M., Boyce Road, South Randwick.

Rowe, H. Ruskin, Equitable Buildings, 350 George Street, Sydney.

Sampson, T. P., Pendennis Chambers, 375 George Street, Sydney.

Saunders, A. R., c/o. Ross & Rowe, 350 George Street, Sydney.

Scott, E. A., 115 Pitt Street, Sydney.

Shaw, Reginald Albert 9 Martin Place.

Silk, T. W., West Maitland.

Smith, F. T., 88 Pitt Street, Sydney.

Somerville, A. F. T., 273 George Street, Sydney.

Spain, Alfred, F.R.I.B.A., 16 Spring Street, Sydney.

Steer, Victor G., 68½ Pitt Street, Sydney.

Stocker, H., "Karola," 49a Bennett Street, Bondi.

Thorp, S. G., 226a George Street, Sydney.

Vernon, H. Venables, 38 Martin Place, Sydney.

Vicars, Jas., Challis House, Martin Place, Sydney.

Wagstaff, Harry James, 491 Bourke Street, Melbourne.

Warden, Sidney, 8a Castlereagh Street, Sydney.

Wardell, H. E., 20 Bridge Street, Sydney.

Waterhouse, B. J., 17 Bligh Street, Sydney.

Wells, R. M. S., Dept. Public Instruction, Sydney.

White, H. E., Equitable Building, George Street, Sydney.

Wilshire, H. A., 3 Spring Street, Sydney.

Wilkinson, Prof. Leslie, F.R.I.B.A., School of Architecture, Sydney University.

Winn, Frederick, 2 Hunter Street, Sydney.

Wright, Arthur Henry, 79 Pitt Street, Sydney.

#### **Associates (A.I.A.).**

Allen, F. G. L., A.R.I.V.A., Rickard House, 84 Pitt Street, Sydney.

Allan, W. W., 23 Moore Park Road, Paddington.

Aley, Augustus, 54 P.O. Chambers, Sydney.

Backhouse, O., c/o Architects' Branch, Dept. of Education, Sydney.

Barry, William George, 170 Ben Boyd Road, Neutral Bay.

Baxter, Gerald Preston, Dept. of Public Works, West Kempsey.

Bayley, Arthur L., 92 Wardell Road, Dulwich Hill, Sydney.

Bloomfield, F. l'Amson, A.R.I.B.A., 115 Pitt Street, Sydney.

Beattie, Oscar Alexander, A.R.I.B.A., Tryon Road, Lindfield.

Beckley, Percy G., 97 Flood Street, Leichhardt, Sydney.

Board, F. J., Lismore.

Bohringer, Charles, Earle Street, Roseville.

Bretnall, Eric Charles, Dardanella, Bowral.

Buckle, F., 107 Pitt Street, Sydney.

Budden, H. E., E.S. & A. Bank Chambers, George and King Sts., Sydney.

Cambridge, Ernest Robert, Railway Construction Branch, Public Works Dept., Sydney.

Carfrae, Alec Swinton, 113 Pitt Street, Sydney.

Chapman Victor Charles, "Dinorwie," Margaret Street, Woolwich.

Chinn, Frederick Henry, 23 Hankey Street, Wellington, New Zealand.

Cizzio, V. D., c/o S. Warden, 8a Castlereagh Street, Sydney.

Clark, A. Lanyon, 81 Elizabeth Street, Sydney.

Clatworthy, Frank, c/o Manson & Pickering, Union House, George Street, Sydney.

Collins, Roscoe J., 12 Castlereagh Street, Sydney.

Colman, Arthur Ernest, District Works Office, Wollongong.

Cook, G. S., Dept. Works and Railways, 151 Collins Street, Melbourne.

Copeland, Cecil R., Works and Railways Dept., Customs House, Sydney.

Crane, Arnold N., Daily Telegraph Buildings, King Street, Sydney.

Crust, John, Dept. of Works & Railways, Customs House, Sydney.

Dalziel, John George, 22 Queen Street, Mosman.

Darling, T. J., 8 Spring Street, Sydney.

Dawson, Joshua, 152 West Street, N. Sydney.

Deeble, John Nation, Byng Street, Orange.

Donoghue, Jack Patrick, c/o. Hennessy & Hennessy, 247 George Street, Sydney.

Douglas-Smith, Arthur, 8 Winchcombe Avenue, Haberfield.

Duckworth, Bertram C., "Pipitea," Prince Edward Street, Long Bay.

England, W. O., 17 Castlereagh Street, Sydney.

Fair, A. C., 6 Canberra Flats, Murdoch Street, Cremorne.

Fowell, Joseph Charles, A.R.I.B.A., 243 Benelong Street, Cremorne Junction.

Gates, Herbert John, "Carthona," Murdoch Street, Cremorne.

Gerard, Allen W., School of Architecture, Sydney University.

Gill, W., Casino.



- Glancey, Clement, 2b Castlereagh Street, Sydney.
- Graham, Hedley Vicars, 35 Pitt Street, Sydney.
- Gray, G. B., 375 George Street, Sydney.
- Green, E. R., A.R.I.B.A., 115 Pitt Street, Sydney.
- Greenwell, C., B.Sc.A., A.R.I.B.A., E.S. & A. Bank Chambers, George and King Streets, Sydney.
- \*Grove, H., Govt. Architect's Office, Phillip Street, Sydney.
- Hamilton, Claude, Daily Telegraph Building, King Street, Sydney.
- Harris, R. Keith, A.R.I.B.A., 72b King Street, Sydney.
- Harrison, George Leslie Blair, 66 Shadforth Street, Mosman.
- Hardwick, H., Mudgee.
- Henderson, Edwin Herbert, Dept. of Works and Railways, Customs House, Sydney.
- Herbert, L. F., 115 Pitt Street, Sydney.
- Hoare, J. N., Messrs. Weston & Hoare, 14 Martin Place, City.
- Hodgson, Allan Mathew, Bull's Chambers, 28 Martin Place, Sydney.
- Holmes, H. E., c/o. Metropolitan Board of Water Supply & Sewerage, Pitt Street, Sydney.
- Hurd, Samuel J., 55 Pitt Street, Redfern.
- Hughes, Gilbert Noel, c/o. Commercial Banking Co. of Sydney, 18 Birch Lane, E.C. London.
- Ironside, William Thomas Raymond, "Eatonian," Stirling Street, Redfern.
- Innes-Kerr, William, B.M.A. Chambers, 32 Elizabeth Street, Sydney.
- Jeffs, C. E., Wagga Wagga.
- Jones, Norman Llewellyn, Agricultural Dept., Mines Museum, George Street N., Sydney.
- Jorgensen, James Henry, 48 Ben Boyd Road, Neutral Bay.
- Keesing, G. S., A.R.I.B.A., 375 George Street, Sydney.
- Kenworthy, George Newton, Tryon Road, Lindfield.
- Kerr, James Aubrey, A.R.I.B.A., Morton Street, Wollstonecraft, Sydney.
- King, A. S., 200 Birrell Street, Waverley.
- Leggatt, Frank Redmayne, Bellevue Street, North Sydney.
- Lockley, H., "Maberry," Highlands Avenue, Gordon.
- MacIntosh, Harry Brewster, East Market Street, Richmond.
- Mackellar, Crawford Hutcheson, 122 Pitt Street, Sydney.
- Maclean, H. A., 5th Floor, Ocean House, Martin Place, Sydney.
- Manfred, Herbert Charles, Belmore Square, Goulburn.
- Mandelson, Maurice Roy, Parsley Road, Vaucluse, Sydney.
- Martin, A. H., "Silverdene," Victoria Street, Roseville.
- Massie, H. H., Messrs. Kent & Massie, 58 Pitt Street, Sydney.
- Mathers, Robert Melrose, 63 Awaba Street, Mosman.
- Mathers, William Melrose, Lennox Street, Mosman.
- Mathison, G. H., "Runnimead," Grosvenor Street, Croydon.
- McBurney, Harold N., 15 O'Connell Street, Sydney.
- McCredie, L. C., "The Lum" Rydall Road, off Fourth Avenue, Eastwood.
- McCredie, L. G. H., C/o. J. & H. G. Kirkpatrick, Findon House, Flinders Lane, Melbourne.
- Mead, Harold Roderick, 92B Pitt Street, Sydney.
- Mills, J. C. R., 38 Martin Place, Sydney.
- Money, Percy John, Works Director, Port Darwin.
- Moore, John D., A.R.I.B.A., 72b King Street, City.
- Morrow, John Donald, Fitzmaurice Street, Wagga Wagga.
- Moyes, William Shepherd, Architects' Branch, Dept. of Public Works, Sydney.
- Neave, S. A., A.R.I.B.A., 247 George Street, Sydney.
- Noone, John Murray, Architects' Branch, Dept. of Public Works, Sydney.
- Nurzey, N., Technical College, Sydney.
- Osborne, Alfred James, Renwick Street, Drum-moyne.
- Owen, P. T., Commonwealth Works Dept., Melbourne.
- Oxenham, S. S., Council Chambers, Bowra-ville.
- Parker, H. E., 52 Musgrave Street, Mosman.
- Peplow, David, 3rd Avenue, Campsie.
- Peploe, F. W., c/o. Hennessy & Hennessy, 247 George Street, Sydney.
- Pitt, Eric Clarke, 92b Pitt Street, Sydney.
- Prevost, R. A. de T., 17 Castlereagh Street, Sydney.
- Roarty, S., A.R.I.B.A., Daily Telegraph Build-ings, King Street, Sydney.
- Robertson, Struan, 14 Martin Place, Sydney.
- Rutledge, Ralph Gordon, Daily Telegraph Building, King Street, Sydney.
- Ruwald, Cyril C., A.R.I.B.A., Palmer Street, Chatswood.
- Ryan, F. P., 661 Dowling Street, Moore Park, Sydney.
- Scott, Elwin Harry, Daily Telegraph Building, King Street, Sydney.
- Scott, T. M., c/o. E. A. Scott and Green, 115 Pitt Street, Sydney.
- Seaton, Stanley Alfred, c/o. Messrs. Robert-son & Marks, 14 Martin Place, Sydney.

The asterisk (\*) denotes a Licentiate R.I.B.A.



Seale, Joseph Richard, Mason Avenue, Cheltenham.  
 Shaw, R. A., c/o W. J. Monks, F.I.A., Wagga Wagga.  
 Shiels, N. Villar, 4 Castlereagh Street, Sydney.  
 Smith, C. H. Strachan, c/o. Post Office, Tweed Heads.  
 \*Sparke, A., Wahroonga.  
 Soden, Leslie John, Barker Road, Strathfield.  
 \*Spark, C. H., Architects' Branch, Education Department, Sydney.  
 Stafford, Alan Edgecliff, 53 Pine Street, Randwick.  
 Stansfeld, J. S., Turramurra.  
 St. Julien, C. W., 207 Bondi Road, Bondi.  
 \*Sykes, Joseph, 76 Bridport Street, Albert Park, Melbourne, Vic.  
 Taylor, Florence Mary (Mrs.), 20 Loftus Street, Sydney.  
 Thorne, W. T., Albury.  
 Tingle, E., Watt Street, Newcastle.  
 Todd, C. H. Uttley, Dept. of Works and Railways, Selbourne Chambers, Pirie Street, Adelaide, S.A.  
 Traill, S. John, Warrawee, Sydney.  
 Tojkander, Bengt (Member of Architects' Association of Finland), c/o Messrs. Robertson & Marks, 14 Martin Place, Sydney.  
 Walford, Dudley Vivian, Commerce Building, Ash Street, Sydney.  
 Walker, Charles Mack, 114 Hunter Street, Sydney.  
 \*Wall, W. B., Govt. Architect's Office, Phillip Street, Sydney.  
 Ward, Peter, Newington Road, Stanmore.  
 Waterston, H. C., 17 Castlereagh Street, Sydney.  
 White, H. C., Singleton.  
 Withers, W. H., Campsie.  
 Wilton, F. H. B., Equitable Building, George Street, Sydney.

Wilshire, Esmond B., Yaralla Chambers, 109 Pitt Street, City.  
 Winter, C. R., A.R.I.B.A., c/o Messrs. Robertson & Marks, Martin Place, Sydney.  
 Wood, O. P., A.R.I.B.A., Daily Telegraph Building, Sydney.  
 Woodforde, M. V. E., c/- Messrs. Budden & Greenwell, 72b King Street, Sydney.  
 Wright, George, "Clifton," Kenneth Street, Longueville.  
 Young-Wai, Samuel, 12 Dover Street, Summer Hill.

#### *Honorary Members.*

Blacket, Cyril, Tasman Park, St. George's Basin.  
 Carter, Norman, Vickery's Chambers, Pitt Street, Sydney.  
 Cohen, Judge, Judges' Chambers, District Court, Queen's Square.  
 Davey, J. J., "Bransburton," Day Street, Marrickville.  
 Ifould, Wm. H., Principal Librarian, Public Library, Sydney.  
 Lister-Lister, W., 76 Pitt Street, Sydney.  
 Lysaght, Herbert Royse, 8 Spring Street, Sydney.  
 Mann, G. V. F., Director of the National Art Gallery.  
 Souter, D. H., 17 Castlereagh Street, Sydney.  
 Sulman, John, F.R.I.B.A., Warrung Street, McMahon's Point.  
 Walker, Frank, Chatswood.  
 Warren, Professor W. H., Sydney University.  
 Watson, Capt. James H., 3 West Street, North Sydney.

#### *Students*

Beaver, Harold C., "St. Aidans," Darling Street, Chatswood.  
 Marsh, Arthur P., "Millhaven," Polding Street, Fairfield.  
 Smith, W. M., "Handsworth," Princess Street, Canterbury.

The asterisk (\*) denotes a Licentiate R.I.B.A.

John J. Lough, Official Secretary, 5 Elizabeth Street, Sydney. Tel., B 4915.

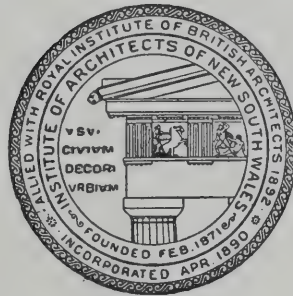






# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



FEBRUARY 15TH  
1923

VOL 12. No. 2

PRICE ONE SHILLING



## ADDRESS BY MR. FRANCIS JONES, F.R.I.B.A., PRESIDENT OF THE MANCHESTER SOCIETY OF ARCHITECTS.

Meeting held October 11th.

Gentlemen,

This is the first general meeting that has been held since you did me the honour of electing me your president. I thank you most sincerely for the great honour you have done me. The position carries great responsibilities which I hope I shall be able to shoulder in a manner satisfactory to you and to myself. Whatever my deficiencies for the post of President to the Manchester Society of Architects may be (and I know they are many), lack of enthusiasm is not one of them. I believe in the Society—I believe it stands not only for our own good but for the good of Architecture, and for the good of Manchester. I thank you again most heartily.

My regular attendance at M.S.A. opening meetings from the Victorian era onwards has driven me to the conclusion that a presidential address is a necessary evil to any Society—an evil divided more or less equally between the President and the members, or at least the nice portion of the members who are good enough to attend. There must be some object in them or they would not be so general, and I have spent a good deal of time lately in trying to find out what that object is. I have not, however, been successful in finding a solution.

I have also sought for a reason why this President at any rate should *not* give an address, but again my efforts proved abortive. So here goes my humble effort to conform to tradition.

I will tell you something of the Society's doings during the past year, and something of what I think the ideals of a Society such as ours should be.

Like all Gaul, the functions of an Architects' Society is divided into three parts. One part educational, one part artistic and one material. To each of which must be added another element—the social element if the blood of the Society is to function properly.

The whole should be taken regularly at such times and places as the Council may decide, and as much oftener as possible. We have only just emerged from the long period of stagnation caused by the war—a period during which not a single student joined the Society—without new blood the body must inevitably decline—without students a Society of Architects becomes anaemic, and before long will fade away. The ideal composition should consist of graduated parts of young, middle-aged, and elderly. Young, in which I

include the students and young associates—middle-aged, in which I am reluctantly compelled to include myself, and elderly, in which I will not venture to include anyone, but on their ripe judgment and experience the well-being of the Society largely depends, and from them the young should receive most necessary encouragement.

I appeal most earnestly, therefore, for regular attendance at these rooms of all the classes I have named.

We enjoy the great advantage over most Architects' Societies in the possession of these rooms—from meeting recently so many presidents of allied societies I find we are the constant envy of them all in this respect, and we owe a great debt of gratitude to those departed Architects whose generosity has made a regular home for us possible. It is one of the ideals cherished by all the allied societies, an ideal which we have been fortunate enough to achieve.

But let us return to part one—Educational. During the past year the School of Architecture has been taken over entirely by the University, and the whole of the work will, in future, be carried on in one separate building under one general direction, instead of in several buildings up and down the town, and subject to different authorities who did not always see eye to eye; a complete School of Architecture—another ideal achieved.

At the School of Art the Corporation has also organised a complete syllabus for those who are not taking the University courses. One must be grateful for all efforts made for Architectural education, and I feel we are very much in debt to the Corporation who, until the University instituted a Chair of Architecture, were entirely responsible for Architectural Education in Manchester. In my own experience the late Mr. Richard Glazier was untiring in his efforts to assist Architectural Students in every possible way, and I hope the Corporation will understand our motives in urging that the University should assume complete control of their Architectural students. It is because we feel that in addition to the artistic and technical subjects the students' general education should be carried to a higher standard, and that the proper architectural spirit can best be fostered in a self-contained school where the students have all similar interests and where they will learn as much from each other as from any other



source. I hope the University and the Corporation will still co-operate sufficiently to prevent wasteful overlapping. The test of a School of Architecture is not in the number of its pupils, but a certain minimum number is an economic necessity—I do not know whether the number of architectural students in Manchester is sufficient to justify two schools—we only want such students as are anxious to get into the profession for its own sake—it would be disastrous to have the pupils for two schools rather than schools for the pupils.

Mass production has its drawbacks—we do not want to flood the market. Registration, if and when we get it, would make this difficult question of numbers much simpler, but that is another subject on which I will touch later.

Finally, may I say to all students, rejoice in your work and be happy in it.

Do you remember the old Greek fable of the fox and the labourer?

The fox passing a field saw a man ploughing and whistling happily as he went about his work.

Said the fox, "Why do you whistle as you work?"

The man replied that it was because he enjoyed the keen fresh air and the scent of the brown earth, and also because his work was good and provided bread for the people when the wheat should be grown.

The fox replied, "You are foolish to whistle and rejoice—you are but a slave to the farmer who employs you, and your reward will only be a little of the bread you have helped to make for others."

This depressed the man, who ceased to whistle, and felt he was badly done by and little better than the ox who pulled the plough.

Then the fox passed on and saw another man similarly employed, and the fox asked him why he looked so glum and discontented. The man replied that he had good reason to look glum, that he was little better than an ox, labouring hard to make bread for others and making very little for himself.

"But," said the fox, "do you not enjoy working in the keen fresh air with the scent of the good earth, and does it not make you happy to know that your work provides bread for many others as well as for yourself?"

The man soon after began to whistle and sing. "The fox was right," he said, "my work is useful to the world; I have every reason to rejoice—there is no fun like work."

Our work also is useful, and whether we make it enjoyable or otherwise depends upon ourselves, but it is certain that the more we enjoy it the better the work resulting will be.

Students would indeed count themselves fortunate if they realised how hard and stony was the path of the Architectural student of 20 years ago. I think, also, the city will count itself fortunate perhaps 20 years hence, when it realises the higher standard of the buildings it will contain. That is, after all, our greatest ideals—to raise the general architectural standard and make our cities and our towns the pride and the joy of those that dwell in them.

This will not, of course, be accomplished by mere attendance at the School of Architecture,—hard work and earnest endeavour are demanded from the Architect all his days, but it does give everyone a chance—a good start—which he did not often get formerly. Too much used to depend on the office in which the student was articled. He might, of course, be lucky enough to be articled to a good architect who had time and ability to teach his pupil in addition to his ordinary work, but more likely he was left largely to fend for himself in his spare time from tracing plans for the heating engineer, for those were days before the magic of the photoprint, when every tracing had to be made by the sweat of the junior's brow. He only began to get to pure architecture at about 7 o'clock in the evening, when his best energy had already been spent in the aforesaid tracing. Fortunate then is the student of to-day. The Society will keep in touch with the University, and see that the Architectural studies are pursued on lines most advantageous to Architecture—it is certainly through the Society that the School of Architecture has been founded, and it is up to the Society to see that the work is properly done—I am sure the University will give the Society every opportunity possible to see the working of the school, and welcome any criticisms that may be given. I must mention the material side here—the school needs funds—the Institute of Builders have shown a wonderful spirit in this matter and have subscribed £4,500 to the scheme.

The Architects have collected £600, and in addition about £5,000 have been left to the school by the wills of former members of the Society. We must do more, and I appeal to you—all of you—to subscribe liberally to the M.S.A. School of Architecture fund, and ask you to remember that you are not merely helping Architectural Education, but helping also to raise the architectural standard of the city in the near future. Our own Society's competitions have been started again this year, and much excellent work submitted. We must have more competitors next year. We have great hopes for our students, and we look to them to see that our confidence in them is justified.



Now as to the Artistic part of the Society's work. Of course we have papers on Architecture and the arts allied to it, and I think the standard of the papers during the last two sessions has never been higher, and general discussion after the papers, but we want more than that—the rooms should be a general exchange for periodical discussion on all matters of interest to architects. We have a wonderful library, and a discussion at the rooms can often be made much more valuable by reference to books to clear a contested point. One can learn, and does learn, as much from chatting with a brother architect as in any other way, and this emphasises the importance of members of all ages meeting informally at the rooms—the old help the young, and the young keep the old from getting old. The social artistic atmosphere is as good a tonic as a trip to the seaside.

There is nothing new in the foregathering of artists or Architects, or indeed of any body of men engaged in the same calling—they have a bond between them which cannot be found outside their own ranks. Such meetings were probably taking place in the days of the Greeks and Romans—they were certainly of frequent occurrence in the days of the Italian Renaissance, as you will find if you read Vasari.

It is the Society's duty to watch the growth and development of the city, and to shout, and shout loud, when such development is not being done on sound architectural lines. The voice of the Society should be looked for with respect by corporations and all concerned with building, town planning or similar subjects.

At the present time there is a great Town-planning Conference in Manchester. I hope you will all visit the Town Hall during the week and see what has been done, and what it is hoped will be done in the future development of our towns. Town-planning is no new art—the Egyptians, Greeks, Romans, and in much later days the French and the Austrians all had the town-planning sense—why did it lapse? Why were the inhabitants of Manchester and other manufacturing towns so totally unconscious of it 80 or 90 years ago? It was because they preferred mammon to righteousness, riches and personal aggrandisement to the common good. Let not this charge be laid against this generation. I am sorry the Society is not more intimately associated with this conference—it is a charge you are entitled to bring against your President. We are grateful to our town-planning committees for their enthusiasm and the way they are preaching the gospel to the public—their work will certainly be successful. Picture a Manchester to-day which had had

a town-planning spirit 100 years ago, or even 50 years ago. Look at our modern suburbs left entirely to the mercies of the speculative builder—how different they might have been if they had been laid out in a comprehensive manner even 20 years ago.

The Society stands for the betterment of Architecture, and must not hide its light either under a bushel or in the rooms. It must be a power in the city—an authority looked up to by everybody.

It is our duty to enlighten all and sundry, and we have joined with the Institute of Builders and the Royal Institution in arranging public lectures at the University to that end. The more interest the public take in Architecture the better the Architecture will be. If the public demand a higher standard they will assuredly get it. Architecture for Architecture's sake must be our motto.

An Italian boy was once selling some plaster models—he had an assortment of beautiful little classic figures and some very poor trashy ones as well. When asked why he had these damned ugly figures side by side with his Madonnas he replied—"People buy ze dam ugly ones." What the public wants it will get, so let us try to make it want the right stuff.

Another notable event during the last session was the American Exhibition arranged for the Society and held in the City Art Galleries. All who visited were, I think, impressed. The Americans had shown the value of long and thorough study in their interpretation of the classic spirit as adapted to modern public buildings. It is in their public buildings that they excel—both in grandeur of scale and perfection of detail. They also show the value of co-operation, for nearly all the big work is done by groups of Architects working together.

In town-planning, too, they have shown both imagination and courage. They have, of course, the example of England before them, and in laying out their towns they have some knowledge of what the development in fifty years' time of modern expansion is likely to be. We have that experience now, and I think are likely to take advantage of it in the future.

At the Cardiff Conference last Whit week, one of the speakers told us we must "think in generations." What a different England we should have by now had the early Victorians done so. Let us, at least, do our share for posterity.

On the material part of our work I do not need to enlarge, but that part is not material only—to it belongs also the honour of the profession. We must see that Architects are properly paid, and we must see, also, that our clients are treated fairly and that no corrupt



practices are allowed to occur. Any member able to give authentic information to the Society of such practices should do so at once.

We are part of the Royal Institute and owe to it allegiance. As a colony of the Empire is to England so are we to the Royal Institute.

The Institute does a great deal for us—the hard conscientious work done by the Council and Committees of the Institute can only be realised by those who have had the opportunity of seeing them working. The Institute looks after the well-being of all branches of the profession, educational, artistic and material interests all come under the Institute's care.

We are, therefore, vitally interested in the Institute, at which something like a revolution occurred at the last general election. Do we all quite understand why practically the whole of the members of the late Council—men who were leaders of the profession and who had served the Council faithfully for years—failed to secure election? Some, perhaps, might have exceeded their term of usefulness on the Council and some new men with fresh energy and new ideas are always needed, but surely some of the members of the old Council, with their status and experience, were the most useful men the Institute could possibly have to direct its affairs.

If you want to improve an All England cricket team you do not usually select eleven untried men (or 10 and the old captain) to play the next test match; but even if you do, you do not select 10 bowlers without regard to their abilities in other departments of the game.

In the R.I.B.A. all England Council all the new members are bowlers—to bowl out Unification. They may succeed in that, but whether they will be able to obtain the registration runs is another matter.

I feel I must dwell at some little length on this subject, for it is of vital importance to us all, and we must all think the matter out for ourselves—it is a much greater question than the personnel of the Council for a particular year. It is the future of British Architecture and of the profession.

Let us review the position. Registration is, I think, desired by most members of the profession—certainly it was the policy of the old Council, and most certainly it is the declared objective of the new one. So far we are all agreed. Again, who should the controlling body be? Doubtless the R.I.B.A., and up to this point even we would, I think, be in agreement. Then why these tears? Where does the canker gnaw? The ultimate goal of all seems to be the same: the ultimate is a higher standard of Modern Architecture in England. Yet here we are with two parties at the Institute ready

to tear each other's eyes out because, though they both want the same thing, they want to get it by different ways.

If we get Registration, Unification must follow; but it is almost, if not quite, impossible, to get Registration without Unification in some form or other first.

It is an established fact that you can't both eat your cake and have it. You can have it before you eat it, but you can't eat it before you have it. As Captain Cuttle used to say, "The application of these remarks lies in the bearing of 'em."

Registration only is no use to us—you can register anything, such as slaughter houses, patent medicines, letters or plumbers. We want Education and Registration; if we have that, someone must decide how much education before registration—which really means there must be a general control. Who is to be that general control? Naturally, one would say, the R.I.B.A.

But will a man who is a member of a body not allied to the R.I.B.A. agree to that? Or would a man who has practised as an Architect for many years, but is attached to no Society, agree to it? Probably not. We must therefore get this other body and this unattached man to join in with us in some way or other. And this is the difficulty: Amongst the practising Architects not attached to the R.I.B.A. are many capable and efficient Architects. We should all welcome these to the R.I.B.A. But there are also many who, although they have practised for many years, are neither capable nor efficient, and could not reach the standard worthy of registration. These men have made their living for years by designing and erecting buildings, and no Government would pass a bill which would debar them from carrying on their business. But the supply of new men of this type would cease the day of the passing of the Registration Bill; their ranks are filled from time to time by clerks of the works, clerks from builders' offices, quantity surveyors, clerks from District Council Offices, and so on—all without architectural training; and this supply will continue to pour in men to practise in competition with those who have gone through a long course of training in the Architectural School and Architects' offices.

The sooner this polluted supply is stopped at the source the better for the contents of the architectural reservoir from which our supply of buildings is obtained.

The cost of clearing the reservoir is the admission of the present doubtful supply until such time as the whole supply will have to pass through the filter beds, or, in other words, examinations.

This must happen in any profession which has been an open one before it became a closed one. Before medical examinations were compulsory for that profession, all sorts of people obtained a living, or part of their living, through giving medical advice, and when registration of doctors became compulsory, all and sundry—quacks, herbalists, and so on, assumed the dignity of medical men, similarly with the law. If you have to have a bad tooth out, the sooner you go and get it over the better. The sooner Registration is accomplished the better for everybody—the better for the young architect materially, the better for the country architecturally.

This year is the bi-centenary of the death of Sir Christopher Wren, and the Council has decided to hold celebrations in Manchester on February 28. As you are aware the greatest of his works, St. Paul's Cathedral, is badly in need of funds for essential restoration, and all are invited to subscribe to the fund which the Society is organising.

This year should be one of great inspiration, and I hope it will quicken the spirit of all engaged in work similar to that done by the great master 200 years ago.

## THE SHOT-HOLE BORER.

(*Platypus omnivorus* Lea.)

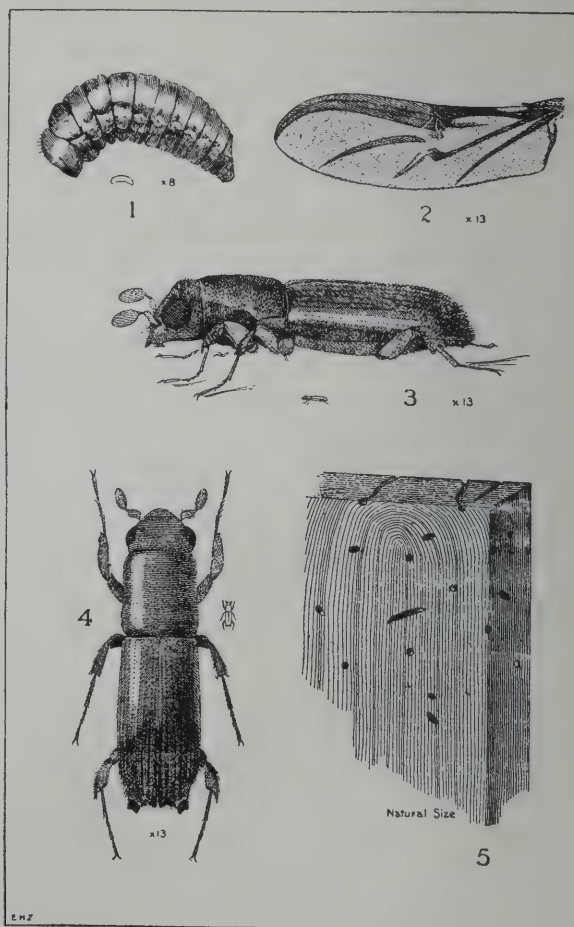
W. W. FROGGATT, F.L.S., Government Entomologist.

There are a number of small beetles which damage timber and which are popularly known as "borers." They attack it in various ways. Thus, the powder-post beetle (*Lyctus brunneus*), reduces the sapwood of many Australian timbers to dust, while a second group of beetles, represented in Australia by *Anobium domesticum*, also remain in the infested timber for years, burrowing through and through it in successive generations until there remains nothing but a shell covering a honeycombed mass, somewhat like wood that has been ravaged by white ants. I have had timber under observation in a building for over ten years, and the *Anobium* beetles and their larvæ can still be found at work in the originally infested boards. Mr. C. French, junior, in a paper, "Furniture and Timber Boring Insects" (*Journal of Agriculture of Victoria*, 1918), calls *Anobium domesticum* the "pin-hole borer," but I would limit the popular name pin-hole borer to the beetles that cut direct burrows through the timber they attack and that do not reinfest it over and over again, as does *Anobium domesticum*.

Under the ordinary conditions of forest life, when a tree is damaged it sickens and dies in the scrub, or it is cut down by the timber-getter. The decay or fermentation of the sap of the bark attracts all the wood-boring beetles in the vicinity. Some come simply for food and eat the surface, others to both feed and lay their eggs upon it, while many beetles themselves bore directly into the trunk.

There are a number of small wood borers that can aptly be called shot-hole borers; they bore circular burrows straight into the timber through the bark, and of these *Platypus omnivorus* is a typical example. The infestation of the timber by the true shot-hole borers

may take place in the forest or brush before the fallen tree is hauled to the sawmill, or while the logs are



The Shot-Hole Borer (*Platypus omnivorus* Lea).

1. Larva. 2. Hind wing. 3. Side view of the perfect beetle. 4. Dorsal view. 5. Timber showing the damage caused by the borer.



lying in the sawmill yards previous to being cut up, or even after they have been sawn up and while the boards are seasoning in the stacks under the sheds.

The genus *Platypus* was formed by Herbest in 1793, for some European wood borers, and all the species of the genus were described and figured by the French entomologist Chapuis in his "Monograph of the Family *Platypedæ*" in 1865. These beetles are widely distributed over the forest areas of the world, but they are most numerous in the forests of North and South America and in the Malay Archipelago. One species has been recorded from New Zealand, and three from Australia. The species now discussed was described by Lea from Tasmania, and I understand from him that this is the first record of it from the mainland. French has described and figured a Malayan species (*Platypus corpulentus*) obtained from timber in a Melbourne timber yard ("Handbook of Destructive Insects of Victoria," pt. v., p. 81, pl. 80); but so far as I know it has not become established in Australia.

Our common shot-hole borer (*Platypus omnivorus*) is widely distributed through the New South Wales coastal forests, commonly known as "brushes" or "cedar brushes." My observations on its habits and life history were carried out last summer at a sawmill where large quantities of brush timber trees are cut up in boards and lengths for the manufacture of furniture in Sydney factories. The principal timbers damaged by these beetles are beech (*Trochocarpa laurina*), blackwood (*Acacia melanoxylon*), corkwood (*Schizomeria ovata*), sassafras (*Doryphora sassafras*) and coachwood (*Ceratonpetalum apetalum*).

These beetles are not noticeable during the winter months, but are very active in December, January, and February. They not only penetrate the sapwood, but bore into the solid material of the logs for some distance. They also attack the newly-sawn boards while they are drying, but when after exposure for a month or so, the sap has dried out, the timber loses all its attractive properties and the borers leave them alone. When I visited the sawmill in the middle of February there was a stack of damaged boards drying in the shed; these were just in the condition attractive to shot-hole borers and there were numbers of beetles in burrows formed in the wood. On some of the boards the beetles were busy laying their semi-transparent rounded eggs in the ends of burrows in contact with neighbouring boards, and on other boards we found the active larvæ, while the outside of the stack was showing signs of attack by beetles that had made their way in from the surrounding forest. We soon made a large collection of the beetles by taking each board

and pushing a dry grass stem into some of the burrows, thus forcing the inmates out into the killing tube.

The beetle is a typical cylindrical borer, of a general dark reddish-brown tint. The front of the head and prothorax are almost black, the legs reddish-brown, the apex of the wing covers clothed with stiff yellow hairs, curiously serrate at the tips, as shown in the figure. The beetle measures a little over 4 m.m. in length. The whole structure of the beetle—its cylindrical form, the head flattened in front, the curious shape of the shovel-like tibia of the fore legs, and the brush of coarse hairs on the extremity of the wing covers—is adapted to its mode of living, by boring through the timber and brushing out the waste dust as it excavates its burrow.

Forest entomologists in Europe and North America have studied the habits of a number of species found in these parts of the world, where an immense amount of damage is often caused to timber in the pine forests. The general experience of these investigators is that preventive measures are the only ones that have met with any success; such measures consist of the removal of all dead and dying trees from the forest areas, and their destruction before the beetles develop and emerge from the infested wood. I. M. Swaine has written some important monographs on Canadian bark-beetles (Dept. Agriculture, Ottawa, 1917-18), and in these he points out that forest fires provide much material for beetle infestation. W. J. Chamberlin, of the Forest Branch of the Oregon Agricultural College, has carried out and published records of some very interesting observations on the pine bark-beetle (*Dendroctinus brevicornis*) in the great pine forests of that State. M. W. Blackman, of the New York State College of Forestry, has studied the habits of *Pityogenes hopkensi* and other allied species that attack the larch; and Dr. A. D. Hopkins, of the U.S. Department of Agriculture, has published many papers and monographs dealing with the shot-hole borers of the United States.

When timber has been cut and is stacked, it is still liable to infestation until it is quite dry. The beetles can, however, be kept away by the use of carbolic sawdust sprinkled beneath the stack and between the layers of boards and battens as they are stacked. A 5 per cent. solution of water and carbolic acid is mixed into a bucket of sawdust, and the moist sawdust is freely sprinkled over the timber. A sawmiller to whom I recommended this treatment of sawn seasoning timber informs me that he has had no timber damaged after it has been treated in this manner.

## MUNICIPAL COUNCIL OF SYDNEY.

## ELECTRICITY DEPARTMENT.

## Service Rules, &amp;c., for the Supply of Electricity.

## RATES AND TERMS OF PAYMENT.

## 1. Rates.

Charges for the supply of Electricity will be:—

**Lighting**—(a) 5d. per unit on the flat rate.

(b) On the Maximum Demand rate 5½d. per unit for one hour daily of Maximum Demand, and 2½d. per unit for the balance of supply. The Maximum Demand Indicator will be re-set once yearly.

**Power.**—Electricity to be used for cooking apparatus, for domestic heating, and for all power purposes other than manufacture, or where the total installation is not over one horsepower, is charged at 2d. per unit. Where used in the process of manufacture, or in the construction of buildings, Electricity is charged for on a sliding scale. The following schedule shows some of the rates charged:—

Units Used per Quarter per Horse- power Connected.	Rate per Unit in Pence.	Units Used per Quarter per Horse- power Connected.	Rate per Unit in Pence.
160	1.8	980	1.032
230	1.526	1050	1.016
300	1.38	1130	1.001
380	1.279	1200	.989
450	1.22	1270	.973
530	1.171	1350	.956
600	1.14	1420	.944
670	1.114	1500	.931
750	1.092	1580	.922
830	1.073	1650	.915
900	1.052	1730	.907
		1800	.900

## 2. Special Reductions.

A special reduction is allowed from the total account of any Consumer who operates a continuous process, or takes supply at high tension or corrects the power factor of the power used. The total sum of reductions amounts to 21%, and they are allowed under the following conditions:—

(a) **Continuous Process.**—A Consumer of electricity who uses it in the operation of a

“continuous process” is entitled to a reduction of 10% on the amount of his accounts. By a continuous process is here meant one which is operated continuously day and night for not less than five days and nights per week. The conditions to be complied with to secure this concession will be supplied on application.

(b) **Supply Taken at High Tension.**—A Consumer of electricity who takes his supply and has it metered as “high-tension,” i.e., at 5,000, 10,000 or 33,000 volts, whichever is the primary voltage in the district, and the connection of whose installation therefore does not call for the provision by the Department of any transforming apparatus, is entitled to a reduction on his accounts for all the electricity consumed by him, whether for power or lighting of 6%.

(c) **Improving Power Factor.**—A Consumer of electricity who takes alternating current, and who uses his electricity in motors or other apparatus so designed and so operated as to maintain the power factor of his demand at unity or a leading power factor, is entitled to a reduction in the amount of his accounts for electricity, the power factor of which has been improved, of 5%.

## 3. Deposit.

The Council may require a security deposit from applicants for a supply of electricity. Applicants will be notified as to the amount of deposit required. When such notification has been forwarded, no further action will be taken to connect the premises until the deposit has been paid to the City Treasurer at the Town Hall, Sydney.

## 4. Minimum Charge.

Where Electricity is supplied through underground service mains, the minimum charge per quarter will be 7s. 6d. Where supply is from overhead service mains, the minimum charge will be 2s. 6d. per quarter.

## 5. Accounts.

Accounts will be rendered quarterly, monthly, weekly or at any time at the option of the Council,



and payment must be made at the City Treasurer's Office, Town Hall, Sydney, within 21 days in the case of quarterly and monthly accounts, and three days in the case of weekly accounts.

If a Consumer refuses or neglects to pay the account within the stipulated time the supply may be discontinued until the account has been paid, together with a fee of 5s. for effecting temporary disconnection. The fee of 5s. will be payable after an Officer has been despatched to disconnect supply, even if supply has not been disconnected.

#### 6. Extra Meters.

Should any additional meters be required above those necessary for the Council's purposes, application should be made for them. The application must include an undertaking to pay the cost of fixing, and also to pay a rental of 10d. per month for each additional meter. This rental will be charged for all maximum demand indicators.

#### 7. Testing Meters.

Any meter will be tested by the Council's Officers on request of a Consumer after prepayment of a fee of 5s. Should the meter on test be found to be registering more than 2% in excess of accuracy, the fee paid will be refunded. All outstanding accounts must be paid before the test is undertaken.

#### 8. Damage to Meters, etc.

In the case of destruction or damage by fire or otherwise of any meter, maximum demand indicator, or other apparatus the property of the Council, the Consumer will be required to replace the apparatus destroyed, or pay the value of it to the Council. It is advisable that the Consumer should insure all Council's property in his charge, except hired motors which will be insured by the Council.

#### 9. Stand-by Supply.

The Electricity supply rates mentioned will not apply in the case of those Consumers who desire a supply of Electricity wholly or mainly as a substitute on occasions of failure of some other source of lighting or power used by them. Where special supply as mentioned above is required, application is to be made setting out the circumstances.

#### 10. Motor Hiring.

The Council will hire out electric motors for connection to its mains. Only a limited stock of motors is held, and intending hirers should enquire at the offices of the Electricity Department if a motor of the size and speed which they require is available.

Hiring rates for standard sizes of motors are shown in the following tables:—

#### CONTINUOUS CURRENT MOTORS.

##### STANDARD SIZES.

Horse-power	RATE PER MONTH	
	Moderate Speed	Slow Speed
	£ s. d.	£ s. d.
½	0 12 6	.. ..
1	0 17 0	.. ..
2	1 3 0	.. ..
3	1 7 0	.. ..
4	1 10 0	.. ..
5	1 12 6	.. ..
6	1 14 0	2 2 0
8	1 17 0	2 6 6
10	1 18 6	2 10 0
12	2 0 6	2 2 0
15	2 2 0	2 13 6
18	2 4 0	2 15 0
22	2 5 6	2 17 0
25	2 8 0	2 19 6

##### ODD SIZES.

3½	0 15 0	.. ..
1½	1 0 0	.. ..
2½	1 5 6	.. ..
7	1 15 6	2 4 6
9	1 18 0	2 8 0
14	2 1 6	2 13 0
16	2 3 0	2 14 0
20	2 5 0	2 16 0
24	2 7 6	2 19 0

#### ALTERNATING CURRENT MOTORS.

##### SQUIRREL-CAGE TYPE.

##### STANDARD SIZES.

Horse-power	RATE PER MONTH	
	Moderate Speed	Slow Speed
	£ s. d.	£ s. d.
½	0 9 0	.. ..
1	0 12 6	.. ..
2	0 18 6	.. ..
3	1 3 0	.. ..
4	1 6 6	.. ..
5	1 9 0	.. ..
6	1 11 0	1 15 0
8	1 13 0	1 18 0
10	1 15 0	1 19 6
12	1 16 0	2 0 6
15	1 17 0	2 1 0
18	1 18 0	2 2 0
22	1 19 6	2 4 0
25	2 1 0	2 6 6

##### ODD SIZES.

1½	0 16 0	.. ..
7	1 12 0	1 16 6
9	1 14 0	1 18 6
14	1 16 6	2 1 0
16	1 17 0	2 1 6
20	1 18 6	2 3 0
24	2 1 0	2 5 6

#### ALTERNATING CURRENT MOTORS.

##### SLIP-RING TYPE.

##### RATE PER MONTH

Horse-power	RATE PER MONTH	
	Moderate Speed	Slow Speed
	£ s. d.	£ s. d.
6	2 4 0	2 8 0
8	2 6 6	2 11 0
10	2 8 0	2 12 6
12	2 10 0	2 14 6

##### SLIP-RING TYPE.

##### RATE PER MONTH

Horse-power	RATE PER MONTH	
	Moderate Speed	Slow Speed
	£ s. d.	£ s. d.
15	2 12 0	2 16 0
18	2 12 6	2 17 0
22	2 14 6	2 19 0
25	2 17 0	3 1 6

#### 11. Continuous Water Heating.

For Electric Water Heaters which are continuously kept in operation day and night, electricity will be supplied at the rate of 5s. 3d. per month per 100 watts of demand. The heaters will be connected directly with the mains without any meter. Should the heating apparatus carry a second additional heating coil for occasional use, the latter may be connected through a meter, and charged at ordinary rates, namely 2d. per unit.

#### 12. Temporary Supply.

Where electricity is to be used temporarily either for lighting or power, it will be charged for at 6d. per unit. All costs of connection and disconnection will also be charged to the consumer. Temporary supply will be charged for where a special connection is made for purposes for which the supply is required for less than a month. The minimum charge for temporary connection will be 10s., not including electricity.

**13. Temporary Service.**

Where it is necessary to lay a temporary service from the mains for building operations, etc., a charge of £7 10s. will be made and this amount must be deposited with the City Treasurer before the temporary service is run. Should a temporary service be subsequently used for permanent supply without alteration, the amount of the deposit will be refunded. If any alteration is necessary to make a temporary service suitable for permanent use, the cost of the alteration will be deducted from the deposit.

**14. Floor Polishing Machines.**

For operating single phase floor polishing machines where an electric service already exists, a charge of £1 is made for connection and disconnection of supply. Electricity is charged for at 6d. per unit if used for less than one month.

**SERVICE RULES.****15. Supply Pressures.**

Electricity is supplied by the Electricity Department at the following pressures:—

**Direct Current:**

For lighting; also heating and cooking apparatus and motors under 3 h.p. . . . . 240 volts.  
For motors of 3 h.p. and over 480 volts.

**Alternating Current:**

For lighting; also heating and cooking apparatus and motors not over 1 h.p. . . . . 240 volts single phase 50 cycles.  
For motors over 1 h.p. . . . . 415 volts three phase 50 cycles.

The area in which direct current is supplied is the central part of the city, and extends from Dawe's Point and Circular Quay on the North, to Central Railway Station, and from Darling Harbour on the West to Macquarie Street, College Street and Wentworth Avenue. If there is any doubt as to whether particular premises are in the direct current area, enquiries should be made at the office of the Department.

The Municipalities in which Electricity is supplied by the Electricity Department to the public are:—

Alexandria	Glebe	Randwick
Annandale	Homebush	Redfern
Auburn	Hunter's Hill	Ryde
Botany	Kuring-gai	St. Peters
Burwood	Lane Cove	Strathfield
Canterbury	Lidcombe	Vaucluse
Concord	Marrickville	Waterloo
Darlington	Mascot	Waverley
Drummoyne	Mosman	Willoughby
Enfield	North Sydney	Woollahra
Erskineville	Paddington	

**16. Special Conditions High-Tension Supply.**

The Council will arrange to supply Electricity at High Tension where large amounts of power are required, and special reductions will be made in the rates charged for High Tension Supply, Power Factor correction and continuous processes. Persons requiring information as to the conditions under which High Tension Supply will be given, should enquire at the offices of the Department.

**17. Service Mains and Meters.**

The Service Mains, Service Fuses, Meter and (if required) Demand Indicator, will be supplied and fixed by the Council. No charge will be made for this work unless:—

- (1) The Service Main extends more than 25 feet from the building line in the case of an Underground Service, or 75 feet in the case of an Overhead Service; or
- (2) The Service Main is terminated at some point other than that selected by the Council's Officers, and which involves the Council in greater cost in running the Service.

In both cases the additional cost of the Service will be charged to the Consumer.

**18. Position of Service Leads, Fuses, etc.**

The Council will decide as to the most suitable positions for its fuses, circuit breakers, indicators, meters and termination of service main. The position of Service Fuses will be as near as possible to the point where the mains touch the building, but one in which they may be reached by a short ladder for replacing fuses. Fuses may be fixed in any suitable position sheltered from the weather. Where Service Fuses are within a building they will be placed within ten feet of the point of entrance of the supply leads.

**19. Position of Meters.**

Meters may be fixed in any position satisfactory to the Council's Officers between the Service Fuses and the Consumer's Switchboard. In the case of private residences, the meters must be fixed in such positions that they can be read without it being necessary to get inside the building. They will not be fixed on enclosed verandahs, or on verandahs with doors that may be locked during the occupant's absence. Provided the above conditions are fulfilled, the meter will whenever possible, be erected on the same board as the fuses.

**20. Service Main—Termination.**

The Consumer's wiring must start from the termination of the Service leaving loops for connecting



to the Service wires, fuses and meters in the positions indicated by the Council's Officers. In the case of an overhead service, the Council's Service Main will terminate at the point of attachment to the building.

#### **21. Watersheds at Point of Entry.**

At the point of entrance to a building, Consumer's leads must be provided with a suitable bell-mouthed bend or other approved terminal fitting of the watershed type.

#### **22. Fixing of Leads in Fuses, Meters, etc.**

Only an employee of the Supply Authority may insert the ends of the Consumer's leads into any service fuse, meter, indicator, current limiter or other device the property of the Supply Authority.

#### **23. Nature and Protection of Consumer's Leads.**

The Consumer's Main Switchboard may be placed in any convenient position on his premises. The conductors between the point of entry and the Consumer's Main Switch must be enclosed in steel conduit, must be stranded, and of adequate sectional area, which in no case may be less than that of a 7/.036" cable.

#### **24. Switches and Fuses to be Ironclad.**

In cases where the main switches and fuses are fixed on the supply side of the meter, they must be ironclad and suitable for sealing with the Supply Authority's seal.

#### **25. Balancing.**

On Direct Current networks not more than 25 amperes may be connected to a two-wire service. A three-wire service will be run where the load to be connected exceeds 25 amperes, and the load must be balanced as nearly as practicable on the positive and negative sides of the system.

On Alternating Current networks not more than 15 amperes may be connected to a two-wire service, and not more than 30 amperes to a three-wire service. A four-wire service will be run where the load to be connected is more than 30 amperes. Three-wire services will be run to private houses having more than ten rooms when both lighting and heating, cooking, irons, etc., are applied for. In such cases three-wire mains must be run from the termination of the Service Mains to the Meters. Four-wire services will be run in all cases where alternating current motors above one horsepower are to be used.

When the supply required is greater than that allowed on a two-wire service, the circuits must be divided equally, as nearly as practicable, between

the conductors or phases to which they are connected. The lighting load on one phase or conductor must not be balanced against the power load on another phase or conductor unless both the lighting and power loads are less than 25 amperes on direct current networks, and 15 amperes on alternating current networks.

In determining the number of conductors to be run in any service, the number of lamps, radiators, irons, etc., applied for will be considered, and not the number of points wired; but a minimum power load will be allowed for equivalent to 1 ampere per point connected in dwellings not sub-divided, and 2 amperes per point in all other cases, the minimum in any case being 8 amperes.

All applications must clearly state the nature of the current consuming devices which will be connected, and the current taken by each.

The following details must be given:—

1. Number of lamps of each candle power.
2. Number of motors of each different horsepower.
3. Number of other current consuming devices, radiators, kettles, ovens, cooking ranges, toasters, vacuum cleaners, etc., and current required by each.

#### **26. Additions or Alterations.**

No addition to the number or candlepower or horsepower, as the case may be, of lamps, motors, or other electrical apparatus may be made unless notice of such intended addition shall have been given to the Council, and such addition may not be connected until it has been tested and inspected by the Officers of the Electricity Department and been found to comply with its requirements. If any addition is connected without compliance with this regulation, the Consumer's supply may be cut off or discontinued without notice, and any cost of testing, changing and adjusting meters must be paid by the Consumer.

#### **27. Defects on Installations.**

If any defect in a Consumer's Installation is at any time discovered, the Council shall be at liberty to disconnect the installation until such defect is made good.

#### **28. Metering of Flats.**

In residential flats or buildings subdivided for residential purposes, all lighting circuits connected to one phase of the system must be controlled by one double pole main switch, with main fuses and all heating and 240 volt power circuits connected to one phase must be controlled by another double pole

main switch with main fuses. One master-meter will be provided for the lighting circuits connected to each phase and one master-meter for the power circuits connected to each phase. Sub-meters will be fixed for each flat if required, but a rental of 10d. per month for each meter and the cost of fixing will be charged to the consumer.

### 29. Meter Connections.

Installations connected to direct current networks will be metered by ampere-hour meters, and every two-wire lighting or power installation must be provided with a loop on the active conductor for connecting the meter. Every power installation connected across the outers of the network must be provided with a loop on one active conductor. Installations connected to alternating current networks will be metered by watt-hour meters requiring connections to the neutrals, as well as active conductors. Every A.C. two-wire lighting or power installation must be provided with loops on both active and neutral conductors for connecting the meter. Three-phase motor installations up to 50 amperes will be metered by a meter connected to one phase only, and loops must be provided in one active conductor and the neutral for connecting to the meter. Unbalanced power circuits and all circuits carrying over 50 amperes will be provided with a meter in each active conductor, and loops must be left in the active conductors, and a shunt wire run from the neutral fuse to the nearest meter.

A.C. circuits over 50 amperes will be connected to meters fitted with current transformers. Loops must be left in the active conductors for connecting the current transformers, and a pair of single .0032 sq. in. (1/16-S.W.G.) wires run from the service fuses (or sealed disconnecting links) to each meter. The meter will be placed five feet from the current transformer, and connections between the current transformer and the meter will be supplied by the Council, but conduit for protecting these connections, and the necessary potential wires, must be supplied and erected by the Consumer.

Single phase power circuits connected across two phases, will be metered by one meter in each active conductor with the shunt coils of the meters connected in series. In this case, it will be necessary to leave a loop in each active conductor.

### APPARATUS.

#### 30. Starting Currents of A.C. Motors.

**Three-phase A.C. Motors.**—The maximum starting currents as measured by a damped ammeter must not exceed the following:—

Motors, not exceeding 2 b.h.p. 12 amps	
Motors, exceeding 2 b.h.p., but	
not exceeding 8 b.h.p. . . . . 6	„ per b.h.p.
Motors, exceeding 8 b.h.p., but	
not exceeding 12 b.h.p. . . . . 5	„ „
Motors, exceeding 12 b.h.p.,	
but not exceeding 25 b.h.p. 4	„ „
Motors, exceeding 25 b.h.p. . . . . 3	„ „

#### 31. Power Factor of Motors.

The power-factor of A.C. Motors at full load must be not less than the following:—

Motors, not exceeding 2 b.h.p. . . . .	75%
Motors, exceeding 2 b.h.p., but not exceeding 8 b.h.p. . . . .	80%
Motors, exceeding 8 b.h.p., but not exceeding 25 b.h.p. . . . .	84%
Motors, exceeding 25 b.h.p. . . . .	86%

#### 32. Water Heaters.

Water Heaters in which the heating element is in direct contact with the water will not be connected if the resistance between the heating element and earth is less than 10,000 ohms with the water running. The water must not leave the heater at above earth potential.

#### 33. Interference With the Supply to Other Customers.

Applicants wishing to connect electric welding apparatus, furnaces, X-ray outfits, rapidly fluctuating motor loads and the like, should first communicate with the Electricity Department and ascertain what conditions they should observe with regard to such apparatus.

In the event of a Consumer operating any such apparatus aforesaid, or any lift or motor in such a manner as will interfere with the supply to other Consumers, the City Council may call upon him to make such necessary adjustments or alterations, and to so operate the apparatus as to ensure that the supply to other Consumers will not be interfered with, and in the event of his failing to do so, the City Council may cut off the supply of Electricity to him. The fact that the City Council shall have connected and approved of the apparatus aforesaid, shall not be taken to exempt the Consumer from the operation of this clause.

#### 34. Conductors Not to be Earthed.

No conductor in a Consumer's installation shall be connected to earth, and all conductors must be equally insulated as provided in the Electrical Wiring Rules of the Institution of Engineers, Australia.



No supply will be given to premises wired on the concentric system using an uninsulated "outer" conductor.

### 35. Wall Plugs for Lighting and Power.

Where it is required to provide for the separate metering of current supplied at different rates, the installation shall be divided into separate and distinct circuits, which must not be bunched, and all wall plugs, connectors and the like, must be of such different types that it will not be possible to connect the plug of any portable apparatus, chargeable at a certain rate, to any part of the installation conveying current, chargeable at a lower rate.

No lamp holder may be connected to any circuit the supply to which is given at power or heating rates, except as provided in Wiring Rule No. 115, in the case of pilot lamps, which, however, shall be so installed as to render it impossible to use them for general illuminating purposes.

### 36. Special Lighting.

Special lighting such as the lighting of ovens, wet factory premises, garden lighting, designs for public illuminations, and the like, also all lighting of a temporary nature, must be referred to the Electricity Department and approval obtained before the work is connected.

### 37. Switches to be on Non-Earthed Conductors.

The ends of non-earthed conductors to which all single-phase switches must be connected in accordance with Rule No. 26 of the Electrical Wiring Rules of the I.E.A., must be labelled "switch-wire" in order that the Electricity Department may correctly connect the Consumer's leads to the service leads.

## INSTALLATION RULES.

### 38.

Until the Rules of the Australian Institute of Engineers are issued the Fire Underwriters' Rules will apply.

### 39. Switchboards—Live Metal to be Covered.

The live metal of all switchboards must be covered, except switchboards erected in engine rooms or rooms specially set apart for switchboards.

### 40. Labelling Switchboards.

Every switchboard, fuse board and distribution board from which an electric installation or part of an electric installation is controlled, must have each circuit labelled in such a way as to make it clear which part of the installation each switch and fuse controls. The label on each circuit must set out the number or numbers, or name or names of the

rooms the installation of which is included in that circuit. Also whether the circuit is for lighting, for 240 volt "power," 415 volt "power," 480 volt "power," or as the case may be. Labels must be easily legible. They may be of stout cardboard, each fixed to the switchboard or the switchboard cover by two screws and washers. The lettering must be in ink and in block letters. As an alternative to labelling each circuit separately, each circuit may be numbered and a "key" setting out clearly what portion of the installation each numbered circuit controls may be fixed to the switchboard, or the switchboard case. Such a "key" must be of such material, and so fixed that it cannot be easily removed without the use of tools. The lettering used in labelling and numbering circuits, and in "keys" must be such as will not quickly fade. Lettering in Indian ink will be preferred. Ordinary typewritten lettering will not be approved. This rule will not be enforced in the case of installations in private dwellings, not sub-divided where the whole of the premises have been completely provided for, and where the number of lights does not exceed 30 or the total connected load does not exceed 25 amperes.

### 41. Isolation of Circuits—Power and Light.

Every Consumer's main switchboard must be distinctly labelled for identification, and the main fuses must be controlled by the main switch. All feeders to distribution boards must be controlled by circuit fuses. Lighting circuits must be entirely isolated from power circuits from the service fuses onwards, and must be connected to separate switchboards. A single set of mains for light and power may be run in one conduit from the service fuses to the meters, if a distribution point is provided at the meters consisting of one sealed iron-clad isolating link for each conductor.

Lighting circuits and two-wire power circuits connected to separate phases, or to each outer conductor of the three-wire D.C. system, must be kept isolated from the service fuses onwards (or from the isolating links if provided), and must be run in separate conduits and connected to separate switchboards throughout.

Three-phase circuits must be isolated from two-wire circuits, and must be run in separate conduits.

### 42. Motors.

Motors to be used in dusty situations as in Flour Mills, Foundries, Blacksmiths' Shops, etc., or where they may be affected by acid or corrosive fumes, should either be of the totally enclosed type, or should be suitably protected from dust or fumes.

The best means of protecting the Motor is to instal it in an adjoining room which is free from dust and fumes, allowing the belt or shaft to pass through the wall. Motors should on no account be enclosed in wooden boxes, which prevent the proper circulation of air to ventilate the Motor. Pipe Ventilated Motors are recommended for dusty factories or wet positions.

#### 43. Motors.—Accessible Positions.

The position selected for the Motor should be one in which it is accessible for inspection and repair. There should be sufficient space to carry out small repairs without removing the Motor. Motors fixed above the floor level should be provided with a permanent fixed ladder.

#### 44. Motors—In Damp Positions.

Motors exposed to damp, such as in Butchers' Shops, buildings in course of erection, or where a hose is used for washing down, must be raised at least eighteen (18) inches above the floor level, and properly protected from water falling on them or being splashed on to them.

#### 45. Aerial Conductors.

No Aerial Conductor may at any part of its length be less than fourteen (14) feet from the ground, or less than seven (7) feet above a flat roof. A flat roof in this case means one on which a man may stand upright without difficulty.

#### 46. Installations Near the Ocean.

An installation for premises looking on or close to the ocean, will not be accepted for connection to the Council's Electricity Supply Mains if the switch-board or group of switchboards controlling the installation is exposed to the salt air, and is fitted with a metal covered switch or switches of the rotary snap switch type, or other similar types. Non-indicating porcelain covered switches are recommended for installations in these positions.

This regulation will apply to installations in the area east of a line drawn at a distance of half-a-mile from and parallel to the coast line between the Gap (South Head), and Little Bay.

## THE TIMBER SUPPLY COMMITTEE.

### *Interim Report.*

The Committee recommends that the following steps should be taken to eradicate the various forms of borers in Australian and imported commercial timbers.

1. That the Government be urged to appoint a qualified Entomologist having a knowledge of Australian timbers and forest insects, to make a careful study of the pests, and report on their life history, and recommend efficient means for their eradication.

2. That Regulations be framed in the meantime to ensure the following:—

- (a) That all timbers be removed from the forest to open spaces immediately after felling.
- (b) That the bark be stripped off as soon as possible after the timber is felled, and the logs sprayed with a protective deterrent mixture.
- (c) That sawn timber, except hardwood, be "open" stacked.
- (d) That all infected logs be steamed.

(e) That stacks of timber in timber yards be inspected, and, if found to be infected, be satisfactorily disinfected or destroyed.

3. That timber in buildings, furniture, etc., found to be infected be treated with creosote, kerosene, turpentine, corrosive sublimate or other approved mixture.

4. That the sale of sapwoods, except where satisfactorily treated, be prohibited, and even then they are not to be used in construction.

ARTHUR W. ANDERSON,

Chairman.

16/1/'23.

### COMPETITIONS

COMPETITION.	CLOSING DATE.	REMARKS.
N. S. War Memorial ...	—	Approved.
Port Said Memorial ...	31/3/23	Approved
Queen Victoria Buildings	28/2/23	Approved
Victorian National Memoriam	30/6/23	Approved



## RESIGNATIONS.

A LETTER COUCHED IN THE FOLLOWING TERMS HAS BEEN SENT BY THE PRESIDENT TO ONE OR TWO OF THE MEMBERS WHO HAVE TENDERED THEIR RESIGNATIONS.

12th January, 1923.

The Council views with regret your resignation as a member of this Institute and, before accepting same, wishes you to seriously reconsider your decision on the following grounds:—

1. That the service the Institute can render members does not terminate with registration. In point of fact, that is only one step in the efforts of the Institute to improve the status of the profession.

2. That the position of the Institute, in the opinion of the public, can only be improved and maintained by the unity of members giving support to the Institute working on their behalf.

3. That the least the Institute might expect from gentlemen who have been members during the developmental period is a continuance of interest to enable

the Council to still further expand its affairs and prestige: a matter of vital importance to every member.

4. That the resignation of a member creates an injurious impression in the eyes of other members and the public.

5. That members should realise that in return for the efforts of many Councils in the past the least to be expected would be service, in the general interest, for members.

6. From time to time changes in the Architects' Act will become necessary for the benefit of the profession, and no factor will be more potent in making for such changes than the Institute of Architects.

7. The advantages of membership are of great value when travelling in other States or abroad.

## INSTITUTE LIBRARY

*Library Rules for Borrowers.*

1. If a book is lost or stolen from a borrower, or if the same is not returned by him within fourteen days, from the date of issue, he shall replace it, or pay to the Council the full value of such book. In case of the book being part of a set or series, and the borrower neglecting to return the same within fourteen days as aforesaid, or being unable to replace the same, in consequence of its having been lost or stolen, he shall pay to the Council the full value of the whole set or series.

2. A borrower shall keep the books borrowed by him from the Library clean and in good condition, and

shall not tear, nor turn down the leaves, nor mark, nor deface, damage, or injure the book in any way.

3. If a book is torn, damaged, marked, defaced, or injured while lent to a borrower, such borrower shall, within one week of notification from the Council, replace the book, or pay to the Council the full value of the book; or, in case it is part of a set or series, and he shall not replace the said book, the full value of the whole set or series.

In cases where the book is replaced the borrower shall be entitled to the injured book.

4. A borrower shall be entitled to borrow only one book at a time, but at the discretion of the Council two volumes of one work may be issued at the same time.

5. A borrower shall return any book borrowed at the latest within fourteen days after the date of issue; but books may be renewed upon application at the discretion of the Council.

6. If a book is not returned within the time prescribed by the preceding rule, the borrower shall pay the sum of sixpence for each and every day the book is retained beyond the prescribed time.

7. Certain volumes may not be removed from the Library, and are for reference only.

**THE COMMON ROOM.**

The COMMON ROOM at the INSTITUTE OF ARCHITECTS is available for Arbitrations, Consultations and the like.

*Terms on application to the Secretary.*

## ARCHITECTURE.

## INDEX TO VOLUME XI, 1922.

Annual Dinner, I.A.N.S.W. . . . .	2	Meggitt Ltd., Visit to Mills . . . . .	59
Annual Exhibition, 1923 . . . . .	12, 78	Metters Ltd., Visit to Factory . . . . .	141
Architects Act 1921 . . . . .	13, 62, 141	Membership of R.I.B.A. . . . .	52
A Visit to Metters Ltd. Factory . . . . .	141	Monument at Port Said, Egypt . . . . .	100, 105
Architects' Registration System . . . . .	183	Munro, Mr. Finlay E. . . . .	25
Books Added to Library . . . . .	22	North Headland, Pebbly Beach, near Bateman's Bay . . . . .	35
Black Limestone Block, Exposing Marine Fossils . . . . .	38	Notes of Deputation to Minister for Works and Railways . . . . .	71
Board of Architectural Education . . . . .	94	Officers of Aust. and New Zealand Inst. of Architects . . . . .	112
Board of Architects of N.S.W. . . . .	159	Official Opening of I.A.N.S.W. . . . .	164
By Wash, Bed of River, Position of Wall . . . . .	118	Personal . . . . .	25
Bronze Medal Competition, 1921 . . . . .	172, 183	Permo-Carboniferous Panel at Wyro . . . . .	38
Competitions . . . . .	8, 11, 26, 39, 51, 70, 86, 122, 140, 159, 163, 182	Plan showing Public Garden south of Casino . . . . .	103
Competition for Design for a Monument to be erected at Port Said, Egypt . . . . .	100-105	Panoramic View of Clyde . . . . .	115
Competition for an Illustrated Thesis on Architecture of the Renaissance in Italy . . . . .	157	Position where Wall will be Erected . . . . .	118
Canberra's Future Architecture . . . . .	123	Prizes and Studentship, R.I.B.A. . . . .	142
Correspondence . . . . .	152	Professional Conduct and Practice . . . . .	170
Dam at Liverpool . . . . .	115	Report of Council for year ended 14/2/'22 . . . . .	42
Deputation from Federal Council of Aust. Inst. of Architects to Minister for Works and Railways . . . . .	71	Report of Practice Committee . . . . .	46
Diagram showing locality where modern Quarternary Rock is forming . . . . .	33	Report of Town Planning and Housing Competition Committee . . . . .	47
Electrical Connections . . . . .	76	Report of Journal Committee . . . . .	47
Entrance of River into Nepean at the Back of Mulgoa . . . . .	117	R.I.B.A.—	
Examinations—		Intermediate and Final Examinations . . . . .	143, 124
I.A.N.S.W. and R.I.B.A., Feb.-March, 1923 . . . . .	87	Prizes and Studentship . . . . .	142
Intermediate and Final, R.I.B.A. . . . .	124, 143	Rough Plan showing Bird's-eye View . . . . .	116
Expansion Scheme for Sydney . . . . .	115, 118	Report of Establishment of the R.I.B.A. Exams. in Canada . . . . .	154
Federal Council of A.I.A. . . . .	60	Rome Scholarship in Architecture—Scheme of Competition . . . . .	158
Fletcher's (Sir Banister) "History of Architecture" . . . . .	143	Rawson Inst. for Seamen—Dame Margaret Davidson's Appeal . . . . .	151
Fossil Beddings, Cliff, Ulladulla . . . . .	37	Registration System for Architects . . . . .	183
George's River at Junction with Prospect Creek . . . . .	115	Schedule of Wages as per Awards and Agreements, 10, 23, 64, 75, 144, 160 . . . . .	
Godsell, Mr. G. H., Speech by . . . . .	167	School of Architecture, Sydney University . . . . .	21
"History of Architecture" (Sir Banister Fletcher's) I.A.N.S.W.—	143	Sketching Comp. for Students . . . . .	22
Minutes of Meetings—		Students' Designing Club . . . . .	11, 39, 51
Ordinary General, 8/11/'21 . . . . .	11	Scaffolding and Lifts Act . . . . .	24
" " 14/2/'22 . . . . .	32	School Playgrounds . . . . .	19
" " 14/3/'22 . . . . .	50	Statement of Receipts and Expenditure for year ending 31/12/'21 . . . . .	48
" " 11/4/'22 . . . . .	66	Statement of Trust A/c. for year ending 31/12/'21 . . . . .	48
" " 9/5/'22 . . . . .	80	Sketch of Proposed Site for Monument, Port Said . . . . .	105
" " 13/6/'22 . . . . .	96	Sydney Expansion Scheme . . . . .	115, 118
" " 11/7/'22 . . . . .	114	Scheme of Competition for the Rome Scholarship . . . . .	158
Special General, 14/7/'22 . . . . .	119	Speech by Mr. Godsell at the Master Builders' Picnic . . . . .	167
" " 2/8/'22 . . . . .	130	Scale of Professional Charges . . . . .	171
Ordinary General, 8/8/'22 . . . . .	133	Tasmanian Inst. of Architects—Annual Meeting . . . . .	169
" " 12/9/'22 . . . . .	146	Town Planning and Housing Competitions Committee Report . . . . .	47
" " 10/10/'22 . . . . .	162	Trapp Competition for Design for Bungalow . . . . .	162
" " 14/11/'22 . . . . .	178	University of Sydney—School of Architecture . . . . .	21
Members, List of . . . . .	27, 106	Visit to Metters Ltd. Factory . . . . .	59
Annual Dinner . . . . .	2	Visit to Meggitt Ltd. Mill . . . . .	141
Annual Exhibition . . . . .	18, 39	View of Site, Proposed Monument, Port Said . . . . .	101, 102, 104
Library . . . . .	22, 8, 62, 76, 92	Warden Head, Ulladulla . . . . .	36, 37
Sketching Competition for Students . . . . .	22	Warragamba Irrigation Scheme and Dam . . . . .	117
Council's Report for year ended 14/2/'22 . . . . .	42	Warragamba Water Supply . . . . .	117
Report of Practice Committee . . . . .	46	White Ants. By W. W. Froggatt . . . . .	152
Official Opening of New Rooms . . . . .	164	Woollahra Council—Cantilever Awnings . . . . .	26
Council and Committees, 1922-23 . . . . .	110	Young, Mr. John (Personal) . . . . .	98, 99
Igneous Dike, Wyro, Ulladulla . . . . .	35		
Journal Committee's Report . . . . .	47		
Liabilities and Assets for year ending 31/12/'21 . . . . .	48		



# PROFESSIONAL CONDUCT AND PRACTICE

In order to place on record the considerations which govern the conduct of honourable Architects and the customs accepted and observed by the Architectural Profession, the Council of the Institute of Architects of N.S.W. declares the practice of Architects to be as follow:—

## 1.—PERSONAL AND INTER-PROFESSIONAL OBLIGATIONS.

1. The Architect is both an artist and a technician. He designs the construction, the internal and external proportions, arrangements, decoration and accessories of buildings, directs their execution and regulates the expenditure upon them.
2. The profession of Architecture is liberal and uncommercial. It is incompatible with the business of a builder, manufacturer, dealer in (or agent for) materials used in buildings, or of an auctioneer or house agent.
3. An Architect is remunerated solely by his fees, and is debarred from any other source of profit in connection with the works and duties entrusted to him.
4. An Architect who owns, or has a commercial interest in, any material, device or invention used in building informs his client thereof, and obtains his sanction before permitting it to be used in works executed under his direction.
5. An Architect does not act as a tradesman or broker, and accepts no business which involves his giving or receiving discounts or commissions.
6. An Architect does not publicly advertise, nor offer his services, by means of circulars or other means of publicity employed in trade and commerce. But he may publish illustrations or descriptions of his work, since these contribute to the common fund of knowledge. He may exhibit his name on buildings in course of execution (providing it is done in an unostentatious manner), and may sign them when completed in a way similar to that adopted by sculptors of repute.
7. An Architect declines to obtain work or clients by means of presents, commissions, reductions of his fees, or inducements to agents and subordinates. He refuses all secret dealings with regard to a client or a prospective client.
8. He abstains from seeking in any way the clients of another Architect or the appointments held by him. Should he be

called upon to accept such clients or appointments by reason of the death, retirement or rightful termination of the employment of another Architect, he considers himself the guardian of the honour and interests of his predecessor.

9. An Architect recognises the professional standing of his brother Architects, and admits the right of that title of all who honourably exercise the profession. He is careful to observe towards them the courteous consideration due from one artist to another.

10. The copyright of an Architect's design is the property of the author, and is scrupulously respected by other Architects. His knowledge and experience should nevertheless be always at the service of his profession.

11. When an Architect employs other Architects as draughtsmen or assistants, he gives them his aid and counsel, and treats them with the consideration proper to members of the profession.

## 2.—OBLIGATIONS TOWARDS CLIENTS.

12. The Architect devotes his whole ability and knowledge to protecting the just interests of his Clients. He uses all his knowledge, skill and experience in designing the buildings entrusted to him, directing their execution, regulating the expenditure upon them, and giving his opinion and advice.

13. But he does not lend himself, even at his Clients' request, to proceedings calculated to infringe the rights of others, nor undertake operations which appear to him likely to injure his reputation, to compromise others, or to lead to accidents. In such cases he intimates to his Clients that he finds himself unable to carry out their instructions.

14. He also notifies his Clients as far as possible when their alterations to proposed works are likely to increase the cost thereof.

15. An Architect is remunerated by his Clients (and by them alone) by means of fees, under the Conditions of Engagement stated in the Scale of Professional Charges authorised by the Institute of Architects of N.S.W. He accepts no remuneration or payment of any kind whatever from builders, merchants, buyers or vendors of land or property, under contract with his Clients unless with their full knowledge and approval.

16. In connection with current repairs, administration, and other matters in which charges are made for time and services rendered, the Architect usually delivers to his Clients periodical accounts of his fees. For new works, and for important alterations to or renovations of existing buildings, he receives interim payments on account of his fees as laid down in the Scale of Professional Charges authorised by the Institute of Architects of New South Wales.

17. An Architect declines judicial functions in a matter in which he has already expressed an opinion on the subject of the dispute. When he is nominated as sole assessor or arbitrator, he ceases to represent his Clients, and acts impartially.

## 3.—OBLIGATIONS TOWARDS BUILDERS AND OPERATIVES.

18. An Architect exerts his personal influence to establish harmony, cordiality and good faith between all those engaged upon his works. In so far as is compatible with his duty to his Clients, he endeavours to save expense to the Builders, and labour to the operatives, encourages them to take an interest in the work, and receives with courtesy their technical suggestions for its improvements.

19. An Architect interprets the conditions of a Contract with impartial fairness as between his client and the Builder. He supplies the Builder with clear instructions, and informs him of his intentions by means of drawings, or otherwise, at as early a stage of the works as possible in order that the Builder may make favourable arrangements for their execution.

20. An Architect does not permit the insertion of any clause in tenders, bills of quantities, or other contract documents which provides for payment to be made to him by the Builder, whatever may be the consideration, unless with the full knowledge and approval of his Client.

21. An Architect does not accept any discount, gift, or business commission from Builders and tradesmen, whether employed upon his works or not.

22. Unless specially so requested by his Clients, he does not undertake the payment of Builders.

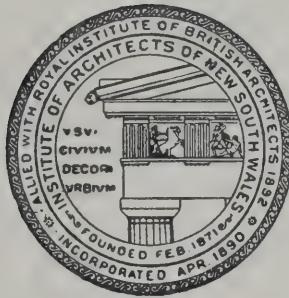
23. Should an Architect have occasion to reprove a builder or foreman, he does so in such a way as not to impair their authority with the operatives.





# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



MARCH 15TH  
1923

VOL 12. No. 3

PRICE ONE SHILLING

# MINUTES OF A BUSINESS MEETING AND OF THE ANNUAL GENERAL MEETING

OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Held at 5 Elizabeth Street, Sydney, on Tuesday, 13th February, 1923.

**The Business Meeting** opened at 7.30 p.m., when Mr. G. H. Godsell (President) was in the chair, and about forty members attended.

The business was to conduct the ballot for the election of new members. Messrs. F. Glynn Gilling and D. V. Walford were appointed scrutineers. Fifty-one ballot papers had been received, and all the candidates as follows were elected:—Fellows: William Alfred Edds, Tweed Heads, N.S.W.; John Herbert Hurst, Hopetoun Avenue, Vaucluse, Sydney. Associates: Harry Bertram Chisholm, Kantara, Lower Forth Street, Woollahra, Sydney; John Keith Shirley, 17 Shirley Road, Wollstonecraft, Sydney.

**The Annual Meeting** was opened at 8 p.m., when the President (Mr. G. H. Godsell) again occupied the chair, and ninety-three members were present.

The minutes of the last general meeting were read and confirmed; and apologies for absence were received from Messrs. G. Sydney Jones, R. W. Pickering, and S. M. Mould.

**The Annual Report** had appeared in *Architecture*, and was taken as read. The only statement as to finances was that included in the report.

**Election of Council.** Messrs. H. C. Kent and A. F. T. Somerville were chosen as scrutineers by the meeting, and collected the ballot papers from the members present. The Chairman announced that Mr. J. A. Kethel had withdrawn his name from ballot for the office of Hon. Treasurer.

**The President:** I would like to announce during the time occupied by the scrutineers in connection with the ballot that during the past week the Federal Council has been sitting, and that very important business in relation to the Commonwealth has been put through; also that to-night we have Mr. Laybourne-Smith with us, of the South Australian Institute, and Mr. Rutt, who also accompanied him from South Australia for the purpose of attending the Commonwealth deliberations. I would like to add that a large amount of business has been put through, and I think it is business that will augur well for the States in the future. I will now ask Mr. Laybourne-Smith to say a word to you. (Cheers.)

**Mr. L. Laybourne-Smith (S.A.):** Mr. President, Gentlemen—I am very pleased to have this opportunity of expressing on behalf of the delegates attending the Federal Council our appreciation of the many kind-

nesses which members of your Institute have extended to us. Whilst we have been here they have quite excelled themselves in hospitality, and there have been times when we have not known how to say an appropriate "Thank you." That is what I want to tell you: How very pleased we are with all that has been done for us, and to make some proper expression of thanks.

As your President told you, we had a very busy week, and you will no doubt be very pleased to know that some thorny difficulties that came before the Council have been overcome in a way with which I am sure you will be pleased, and that will be satisfactory to all the States. I would like, Mr. President, to take this opportunity to assure you that South Australia will always stand loyally behind the decisions of the Federal Council. We have, in the past, adopted without an amendment every decision of the Federal Council affecting the States, that is, Scale of Charges, Code of Ethics, General Constitution of the Federal Council and Regulations for Competitions. Now, I think it is the proper thing—unless there is something which is quite opposed to the policy of the Council—to adopt those recommendations of the Federal Council without amendment. I am proud that we have been able to do it, and I do ask you here, where you have a much more complex constitution, and look at things more seriously than we do in the smaller State, to try and adopt these things in a full spirit, because an important State like this sets such an example to the smaller States. I do not think that I would say anything very wrong if I tell you that there are perhaps one or two States—or, at any rate, one State—which finds it difficult to accept all the recommendations of the Federal Council. But if the big States, assisted by South Australia, set an example in adopting these Resolutions *in toto* then I am sure that the whole six States will have to come into line, and we will get uniformity of practice right throughout. I do not know what your President will say, but I only make this appeal because it is desirable that we should all stand together in this matter.

Once more, I would like to thank you exceedingly for the reception that you have given to the Delegates. (Cheers.)

**Mr. C. W. Rutt (S.A.):** Mr. President, you have spoilt my evening. It is a painful shock to have to



get up and make a speech after all the good times we have been having here. But I suppose it would be hardly the thing for me to decline, anyhow, to get up on my feet and endorse the sentiments that have been expressed by the President of South Australia.

We have had a difficult task, and, gentlemen, we have had a difficult task for years. I happen to have been on this Federal Council since its inception, and every year we have had some outstanding difficulty that has had to be overcome. I think it says a good deal for the general spirit of goodwill between the different States, and possibly for the acumen and diplomacy of those concerned, that in every case we have been able to find some solution of all these difficulties. In the Chair this year we have had Mr. G. H. Godsell, a gentleman who has endeared himself to us all, and it is very largely on account of the way he has conducted the affairs of the Conference that we have come to such a successful termination. (Cheers.)

I do not come here very often as it is, but I have to go home by myself. I cannot tear Mr. Laybourne-Smith away from this beautiful hospitable City of yours, and I can assure you, gentlemen, that if my time was altogether my own—of course, we architects know that our time is not—I should like to stay for a week or two as well. I wish to say that we have enjoyed ourselves in spite of the work we have done. It has been very onerous, but in spite of the weighty matters we have considered, it has been a thorough holiday and a thorough break, and I wish to thank all those of your Institute who have made our stay so pleasant.

**The President:** Gentlemen, for some time past, in consequence of the Borer pest, a Timber Supply Committee has been sitting, and the report which has been very carefully prepared by a very influential committee conducted by our good friend, Mr. Anderson, will appear in *Architecture*. This is a matter, owing to the growth of the pest, that requires the careful consideration of every member of the Profession. I would like to say that the report has been left in abeyance in consequence of this Council retiring, and has been left for the incoming Council to deal with it exhaustively, because when we received the report of the Committee it was too late for the Council that was sitting to do justice to the matter, and, therefore, we preferred to leave it to those gentlemen who would succeed us.

I will ask the Vice-President to announce what is being done in regard to the Exhibition.

**Mr. B. J. Waterhouse:** Gentlemen, the Council is very anxious to direct your attention again to the fact that very shortly our Annual Exhibition will be held. Last year, and I think I might say in previous years,

the Exhibition has not met with unqualified approval from the members of the Institute. They have occasionally felt after the Hanging Committee had done its work that they would like to hang some of the committeemen. I would like to say, as a member of the Committee, that I think one and all have been actuated by just one impulse, and that is to put on the walls the very best work submitted for selection. If members have any suggestions to make as to how future Exhibitions should be conducted, while the ballot is being counted is a good opportunity to express their views on that particular point. We do feel this, that it is essential to select as carefully as possible, and yet we want every Architect in the City to be represented. It is not pleasant at all to find that some firms who are doing excellent work did not send in last year, and the same in previous years. We do want this year to make it as fully representative of the Profession as last year, and look upon you, gentlemen, to help us to make selections which will help to maintain the standard of previous Exhibitions. It would be exceedingly helpful if any member here to-night would express his views upon previous Exhibitions, for it might enable us to carry out the work perhaps more successfully than we have endeavoured to do in the past.

I omitted to mention one thing in regard to photographs. The Committee feel that although there was an excellent photographic section, and the public are undoubtedly interested in photos, a great deal of interest in the Exhibition, from our point of view, disappeared on account of the absence of plans. Many Architects seemed to be disinclined to send in anything but elevations. Plans they look upon as their own private property, and contend that these may contain ideas which are of great commercial value. I venture to suggest to you that that is a very poor spirit. I understand that in Architects' Exhibitions in every country in the world, Architects are ready to submit elevations and plans—and very full and complete plans—of every structure erected, and also allow them to be published in any magazines of high standing. In previous years, particularly in the Domestic Section, many delightfully drawn plans have been received for exhibition. It would be invidious to mention the name of any particular firm which has ceased to send in those plans. I think most Architects will agree that it is very difficult indeed to take any idea holus bolus from a drawing which is on exhibition. They vary so much in every particular instance, that what is gained from a perusal of those plans is just general principles of planning. One learns a lot from observing the work of other architects, not only in Aus-

tralia, but from other parts of the world. I hope this year to see many more plans on the wall and detail drawings, and, particularly, a lot of very fine domestic work. To the best of my recollection, we only had three or four at the last two or three Exhibitions. We want drawings of all kinds. Another point is that those drawings are, in addition, of great interest to the public, great interest to the Profession, and of incalculable value to the younger members and students of the Profession. That is a duty that we as an Institute surely owe to the students and young architects. In order that they may see such work, it has occurred to the Committee that in the near future it might be the work of the incoming Council to endeavour to get an Exhibition of drawings from other parts of the world, particularly England and America. I understand that at the present time there is a very excellent collection of photos on exhibition in London, and they have been sent to America. It would be possible, I think, to secure an extension of the tour of these photos to embrace Australia. That would be of very great interest to us. I suggest to the incoming Council that they deal with the matter, and I also hope, gentlemen, that you will take this matter up and help us to make the Exhibition something that we shall be really proud of.

**Mr. J. D. Moore:** I would like to make a suggestion as regards the Exhibition, and that is, to take one particular job and to exhibit typical sketches, working drawings and details, and photos of that particular job on one panel. I think that would make quite an interesting exhibit.

**The President:** Your suggestion, Mr. Moore, is that for each particular building the whole of the detail plans and photos should be grouped together to illustrate the history right from the very beginning of the job; to take one or two of the preliminary sketches, and sketches in a more advanced stage, and then a typical one-eighth inch scale working drawing, and a typical half-inch detail, and a full-sized detail, and then a photograph of the completed job.

I do not know, gentlemen, whether you know that one of the drawings that was accepted in the last Exhibition was, very shortly afterwards, purchased by the Trustees of the National Art Gallery. It is now in the Water Colour Section of the Australian Court. Are there any other suggestions in regard to the Exhibition?

**Mr. R. Keith Harris** said that they might consider a suggestion that had been made to him. He had forgotten who made it. This was, that it might be a good thing, from the public point of view, if it could

be arranged (possibly at lunch time) to have a few short talks to the general public on the Principles of Planning and Grouping, and other subjects that would more or less appeal to the lay mind.

**The President:** Our Secretary, Mr. Lough, who has been with the Institute for three years, and who has done yeoman work, feels that he requires a rest from his arduous duties. The Council felt that if they could persuade Mr. Lough not to give up the position altogether, but to accept 12 months' leave of absence, when he might think well to come back to the fold, they would do far better than accepting his resignation. (Applause.) Every one who has taken an interest in the work of the Institute knows something of the work that Mr. Lough has achieved, and hence the desire of the Council and the members of the Institute to retain his services if possible. In consequence of this, the Council has appointed Mr. Rowlinson on a 12 months' engagement to take Mr. Lough's position for the ensuing term, and Mr. Lough has been good enough to say that he will stand behind Mr. Rowlinson, and that whenever his services are required they will be available for the Institute. (Applause.) Under these conditions the Council felt that they were doing well for the Institute in making the arrangement that I have announced. I am sure that Mr. Rowlinson will do his best for the Institute at all times. We know him very well. We know him as a very keen member of the Profession and a man who will at all times do his utmost for the welfare of this Institute, and, therefore, I trust that the Institute will endorse the Council's action.

**Mr. H. O. Jackson:** In connection with your reference to our honoured Secretary, Mr. Lough, I should like to pay a tribute of personal respect for the work he has done for the Institute. I do feel that we have had in Mr. Lough one of the most admirable men that any institution has had the privilege of receiving, the services of during the time that he has been occupying the position of Secretary. I am sure that every member of the Institute will be entirely in accord with my opinion that we owe a very high tribute of praise to Mr. Lough for the services he has rendered to the Institute. I have very great pleasure in supporting your reference of appreciation of Mr. Lough. (Applause.)

**Professor L. Wilkinson:** Mr. President, gentlemen, I should like to support Mr. Jackson, and add something with reference to the work of our Secretary, Mr. Lough. In the few years that I have been here, one notices a tremendous change in the Institute from being in the little den below where there was scarcely room to do the work, and no room for members to benefit



very much by the treasures that the Institute possesses. Although one must give full credit for the work that has been done in the past by our hon. secretaries, the time came when the work required the full-time services of such a man as Mr. Lough, and he has come in and made the difference that you all must have noticed. As a member of the Council for some time, one appreciates the time that has been saved the Council by the admirable way in which Mr. Lough prepares the business he puts before us. Some of us may think that there is a little bit too much typewriting and paper used nowadays, but all members of committees and similar bodies must appreciate the way their time is saved by having things properly digested and arranged.

While I am on my feet, I would just like to revert to the question of the Exhibition. I hope that members here to-night, who have not been on the Hanging Committee, will express some of the actual criticisms before all the members which one has heard in general conversations. Those who are responsible for conducting the Exhibition want to know what the desires of members are. The speakers to-night, for the most part, have been more or less on one side of the Exhibition. I hope that many members will get up who will give those who are responsible for the Exhibition their really honest, candid opinions as to how the thing should be run. It seems that there are two ways of looking at the Exhibition. Should it show what a certain group consider is the best work of the year, or should it illustrate the work of the year, good, bad or indifferent? Should it be a kind of topical exhibition, or should it try to set up a certain standard? I hope, Mr. President, that certain members will give us the benefit of their candid criticism on those one or two points.

**The President** reminded members that they had been invited to visit the works of Messrs. L. Berger and Sons on the following day.

**Mr. R. Louat:** Mr. President, I would like to call the attention of the Institute to a matter that I think we ought to be interested in. I read some little time ago in the Press that they were going to do something more to our General Post Office. I also read that the Postal Authorities were afraid to allow the scheme or the design to be known to the public. They candidly admitted that they were afraid of criticism. Now, I contend that it is the duty of this Institute to know something of what they are going to do to that unfortunate building, and I think it is the duty of this Institute to itself, to the public, and to future generations, to ascertain what is proposed to be done, and see that

whatever design they are going to adopt, that it does not make the building worse than it is. We have other instances of Government buildings that have been added to, and I am sure that we are not proud of them. I think that some endeavour should be made by this Institute to learn what is to be done to the General Post Office, and I hope that the new Council will endeavour to find out what the proposition is.

**The President:** I will ask Professor Wilkinson to reply to Mr. Louat.

**Professor Wilkinson:** I suppose that the President refers to the fact that he was called before the Public Works Committee to give an opinion on alternative designs for the extension of the Post Office. I am on rather dangerous ground in referring to the Government and Architecture in the same breath. It is one of the sore points and I do not think it is wise to say very much.

Now, it seems that in a big public building that the public have a right to know what is proposed—especially a building used by the majority of people every day. I expect that at the present time the public spend a great deal more time in it trying to do their business than they wish. Both the plans showed, of course, great improvement on the present arrangements. Indeed, I think it would be impossible to do anything to the General Post Office so far as working plans are concerned, that would not be an improvement. Some time ago I saw an illustration in the daily press; I do not think a plan, but a description and a perspective, but I do not think it wise, if one could remember the details, to say very much. One is asked to give an opinion. They show you a room full of drawings, and in about five minutes' time they say, "Which is the better scheme, this or that?" One has no chance of knowing the data on which the proposals were carried out, and I think we might criticise the way in which people are being invited to give evidence before this Public Works Commission when they have had no chance of really studying the matter as it deserves. I am certainly not prepared to give an opinion on a scheme of any size without having sufficient time first of all to digest the data and facts on which it is based, and plenty of time really to study the matter. Most witnesses can only give very non-committal answers and opinions, and really rather protest that they are not in a position to give the evidence that would be very, very useful. In any case, they have a sort of idea that the decisions come to after a formal enquiry has been made, are very much on the same lines as if there had been no formal enquiry held at all. (Laughter.)

**Result of Ballot.***President:* Sir Charles Rosenthal.*Vice-President:* Alfred Spain.*Hon. Secretary:* Harry Cooper Day.*Hon. Asst. Secretary:* Leith Cecil McCredie.*Hon. Treasurer:* James Peddle.*Council composed as follows:—*

Ernest Alfred Scott

Bertrand James Waterhouse

Hugh Venables Vernon

William de Putron

Leslie Wilkinson

*Two Associate Members:—*

Royston John Keith Harris

John Drummond Moore

**The Chairman:** I now have the pleasure of asking Sir Charles Rosenthal to occupy the Chair. Gentlemen, I am sure that we are all very pleased to have Sir Charles Rosenthal as President of the New South Wales Institute, and I will ask you to loyally support him during his term of office.

**Sir Charles Rosenthal:** Mr. President and gentlemen. It would indeed be strange if one did not appreciate the compliment paid him in being elected to the Chair of this Institute. I have been away from Australia for many years, and there are very many gentlemen in Sydney to-day much better fitted than I am to fill this Chair during the year. There was one feature, however, which influenced me very materially when I was asked to let my name go forward. I will just mention what that feature is. It is perhaps known to you that in my capacity as Alderman of the City Council I have been recently elected to the position of Vice-Chairman of the Works Committee. It may also be within your knowledge that I happen to be, for the moment, a Member of our Lower House, and it did appeal to me that if the members of the Institute saw fit to elect me to this Chair that it might be possible during this year to ensure that a new Building Act should be passed for the benefit of the people of Sydney.

You, gentlemen, are fully aware of the many difficulties that face us in connection with the Building Acts generally, and those of us who are working in the City Council perhaps know more than the general practitioners do how adversely they affect the administration of the City. In the City Council there are many anomalies. Take, for instance, dilapidated buildings, which, in the opinion of our Health Authorities should be demolished. When a request is made by the owners for further consideration, one is compelled to see

whether their claims are justified or not. If one comes to the decision that the building should be destroyed, we are then faced with the anomaly that though we have power to order its demolition, we have no power to order reinstatement. We were faced with this only last week. We ordered the removal of a number of bathrooms, but we could not compel the owners to put up new ones. That is only one of the many anomalies.

I can only say, gentlemen, that I very deeply appreciate the honour you have done me in electing me to this Chair to-night. I question whether it is possible to give the same service to this Institute as the retiring President has done during the last two years. As I mentioned before, I have been out of Sydney for years. I do not claim to be able to do what he has done, but I can claim that the same spirit which impelled him to do so well will influence all those on the Council which has been elected to-night. I feel certain that the Institute will not only maintain but increase its prestige, particularly as we now have the registration of architects an accomplished fact. I understand that 1,100 applications for registration have been effected. Somebody said that was hard luck for the architects. All I can say is that if from the 1,100 practitioners in this State, there are 700 who are qualified to be practising architects, one cannot help but feel that they should be members of this Institute doing work for the benefit of the profession generally.

Thank you, gentlemen, and I hope at the end of my term of office that the members of the Institute will not have cause to regret their selection to-night.

I think that probably the members of the Council should like to record their very sincere appreciation of the work of the President during the last year.

**Mr. E. A. Scott:** Mr. President, gentlemen, it affords me great pleasure to propose a hearty vote of thanks to the President and members of this Council. Although I for one did not see eye to eye with all the work that they did, I still cannot miss this opportunity

**NOTICE**

The time for receipt of Theses in the Federal Council Bronze Medal Competition, has been extended to 31st October, 1923.

Particulars appeared in December, 1922, Architecture.



of expressing my appreciation of the arduous labour done on our behalf. We have had a Council of which the President set an example for the incoming Council to follow. Now, the difficulty that faces every Council is to get the members of the Institute to take an interest in the work they do, and they are not properly appreciated. I hope that now architecture is coming into its own, in appreciation by the public, that members of this Institute will take serious interest in their duty to the profession, and not attach too much importance to duties to themselves.

The retiring President and Council have worked very hard indeed. They have seen very good work done for this Institute, and I do not think that we should allow this opportunity to pass without sincerely thanking them for the work they have done.

**Mr. H. O. Jackson:** I think we ought to fully recognise that Mr. Godsell has considerably augmented the prestige of the Institute during his occupation of the Chair, and that we ought not to let him retire into the shadow of obscurity feeling that his services have not been recognised. I think that a very hearty vote of thanks should be rendered to him for the great work he has done for the advancement of the interests of the Institute.

**Sir Charles Rosenthal:** If no one wishes to speak, I think the best way is to carry that by acclamation.

*Carried by acclamation.*

**Mr. Godsell:** Mr. President and gentlemen, on behalf of the Council and myself, I thank you.

(Meeting closed 9.20 p.m.)

## NORTH SYDNEY WAR MEMORIAL

### CONDITIONS OF COMPETITION.

CLOSING DATE, MAY 15, 1923, APPROVED.

**Particulars.**—Competitive designs are invited for a Memorial at North Sydney of residents in the municipality who gave their lives in the great War. A dedicatory inscription is to be incorporated in the design. Also allow space for about 600 bronze names (letters cast solid on plate not less than  $\frac{7}{8}$  in. in height, nine names to the foot). Plate and names to be provided and affixed by and at the cost of the Memorial Committee.

**Site.**—The site is in St. Leonards Park, facing the end of Walker Street, North Sydney. Plan of the site may be seen on application to the Public Monuments Advisory Board, Local Government Department, Education Building, Loftus Street, and at the Institute of Architects, 5 Elizabeth Street, Sydney.

**Cost.**—The total cost of the Memorial is not to exceed £5,000 (five thousand pounds). This sum does not include lay out of ground, architect's fee (if any), and foundations below ground level.

**Materials.**—The materials used and the workmanship to be of a thoroughly durable nature, and must be specifically described.

**Drawings.**—Drawings submitted to comprise elevations, sections and plan drawn to half-inch scale. A detail of a small portion of the design to be drawn quarter full size. All drawings to be drawn in black ink on white paper, without colour or shading, in line only, and sections blacked in on imperial sheets mounted on cardboard, showing three-inch margin.

**Models.**—A competitor may submit a model of the whole design to the scale of half-inch to one foot, instead of drawings, if he prefers to do so, with a further model of some special feature to one-quarter full size. Competitors who send in a half-inch scale drawing may also illustrate a special feature by a model to quarter full size instead of a detail drawing. Models to be in a dry material.

**Reports.**—No separate reports will be considered; all particulars to be embodied on the drawings, except in the case of models, when a typed description on one page of foolscap may be submitted.

**Adjudication.**—A committee, consisting of John Sulman (President of the Public Monuments Advisory Board to the Minister for Local Government), Alfred G. Milson (Chairman of the North Sydney War Memorial Committee), and G. Sydney Jones (representative of the Institute of Architects of New South Wales), will judge the designs and award the premiums. The North Sydney Committee reserves the right to refuse all designs should the adjudicators report that none of the designs meets with their approval.

**Premiums.**—In accordance with the award of the Adjudicating Committee, the North Sydney War Memorial Committee will pay the following premiums:

- |                             |    |     |
|-----------------------------|----|-----|
| 1. For design placed first  | .. | £50 |
| 2. For design placed second | .. | £30 |
| 3. For design placed third  | .. | £20 |

**Disqualification.**—No competitor may obtain assistance from any member of the Adjudicating Committee, and any attempt to do so will disqualify the competitor.

Designs shall also be excluded—

- (a) If sent in after the period named (accidents excepted).
- (b) If they do not substantially meet the requirements of the competition.
- (c) If any of the conditions or instructions other than those of a suggestive character are violated.
- (d) Work will be disqualified if the design is in part or whole a copy.

**Regulations.**—Each design shall be accompanied by a declaration signed by the competitor, or joint competitors, stating that the design is his or their own personal work, and that the designs have been prepared under his or their own supervision. A successful competitor must be prepared to satisfy the Adjudicating Committee that he is the *bona fide* author of the design that he has submitted.

The premium shall be paid in accordance with the Adjudicating Committee's award, and the North Sydney War Memorial Committee agrees that the author of the design placed first by the Adjudicating Committee shall be employed to prepare the working drawings, specification and details for the Memorial, and supervise the erection, unless the North Sydney War Memorial Committee is satisfied that there is some valid objection to such employment, in which case the author of the design placed next in order of merit shall be employed, subject to a similar condition. The award of the Adjudicating Committee shall not be set aside for any other reason. If the Adjudicating Committee should so decide, the author of the accepted design may nominate an associate, who shall, on approval by the Adjudicating Committee, be allowed to collaborate with the author.

The competitor employed will be paid in accordance with the scale of charges of the Institute of Architects of New South Wales for designing and carrying out the work, providing he obtains a satisfactory tender not exceeding the specified cost.

No design shall bear any motto or distinguishing mark, but all designs will be numbered by the Adjudicating Committee in order of receipt. Each design shall be accompanied by a sealed envelope, containing the name and address of the author, and enclosed in the package.

**Queries.**—Any questions arising out of these conditions may be addressed in writing anonymously on

plain paper to R. H. Barry, Hon. Secretary North Sydney War Memorial Committee, 9 Young Street, Sydney, and in no other way. A copy of any such questions which the adjudicators consider should be answered, and the answers thereto, will be sent simultaneously to each competitor, and form part of these conditions, but questions received after March 29, 1923, will not be answered.

**Delivery of Drawings, etc.**—All designs for the competition shall be addressed and delivered to the Public Monuments Advisory Board, Local Government Department, Education Buildings, Bridge Street, Sydney, at 4 p.m. on Tuesday, May 15, 1923.

**Return of Drawings, etc.**—All drawings or models submitted in the competition, except that of the design selected to be carried out, or on which premiums are paid, shall be collected by the competitors; the same to be held by the North Sydney War Memorial Committee at competitors' risk for a period of one month only from the date of award.

**Exhibition of Designs.**—The North Sydney War Memorial Committee reserves to itself the right to publicly exhibit the designs for a fortnight after the publication of the award of premiums.

## TO ARCHITECTS, SCULPTORS AND MONUMENTAL MASONS

The North Sydney War Memorial Committee invites designs for a Memorial of those residents of the municipality who gave their lives in the Great War, to cost £5,000. Premiums; £50, £30, and £20. Designs to be judged by a Committee comprised of one member of the Public Monuments Advisory Board, one member of the Institute of Architects of N.S.W., and one member of the North Sydney War Memorial Committee. Particulars may be obtained from the Public Monuments Advisory Board, Local Government Department, Education Building, Loftus Street, Sydney, and at the Institute of Architects, 5 Elizabeth Street, Sydney. All designs for the competition shall be addressed and delivered at the Local Government Department, Loftus Street, Sydney, at 4 p.m., on May 15, 1923.



## THE BIRMINGHAM CIVIC SOCIETY

In this description of the constitution and work of the Birmingham Civic Society, I believe that you seek information which will help towards similar work being done here in Manchester by a Society of your own—possibly by this Federation—I shall therefore give you as faithful a record of our work and methods as is possible in the time at my disposal, first by verbal description and afterwards pictorially upon the screen.

It will be difficult to give my address coherence, but I will endeavour to be as little discursive as possible in dealing with a subject which so readily branches along attractive by-ways; and to get rid of some of these asides at the outset, I will sketch quite briefly the general modern movement towards civic betterment of this character, before taking in more detail the work with which I have been actively associated.

In 1890 (twenty years before the first Civic Society appeared in England) the first Municipal Art Commission was established at Boston, U.S. It is not implied by this comparison of dates, that the first stirrings in this phase of Civic Consciousness in England were twenty years behind those of America. The somewhat tardy employment of Civic Societies here is partly explained by our activities in other sections of civic awakening, and partly by our national psychology, which is not easily moved to corporate expression in matters of this kind.

This reluctance is very marked in connection with Art Commissions, of which the first British example has been set up recently in Birmingham, and for the better understanding of which I purpose to say something more of its American prototypes.

The first such Commission appears to have been established by a Boston Law of 1890, which authorised the setting up of a Jury to which all works of Art for municipal ownership must be submitted for approval before acceptance. This experiment in the legal control of amenity was wisely restricted to particular classes of works of Art, and made no attempt to influence the character of design in structure.

The next step in the same direction, and on a similarly experimental basis, was taken by the City of Baltimore in 1895. The Mayor, and seven members representing local cultural bodies, being elected to serve as Commissioners, for the purpose of controlling the erection of Statues, Fountains, Arches, Monuments or Memorials of any kind to be erected in any public place

or municipal building; or any variation of any such existing works.

Boston enlarged its powers in 1898, when it was provided that the Commissioners should be five in number, appointed by the Mayor from lists supplied by selected Art groups. The time of service to be for five years, and a change of personnel to be made each year by the automatic retirement of one member. Power of veto was taken upon all municipal paintings, mural decorations, statues, bas-reliefs, sculptures, monuments, arches, ornamental gateways and other structures of a permanent character intended for ornament or commemoration, all of which had perforce to obtain the sanction of the Commission before acceptance. The Commission also acted, when requested by the Mayor or the City Council to do so, with respect to "any Municipal building, bridge, approach, lamp, ornamental gate or fence, or other structure erected or to be erected upon land belonging to the City, and in respect of any arch, bridge structure or approach, the property of any corporation or individual, and extending in, over or upon any street, avenue, highway, park or public space. These powers constitute in effect a control of all purely decorative art for public purposes and, subject to a request by the Local Authority, a control of all amenity in public structure.

New York set up its first Commission in 1898, and extended its powers in 1901 and 1907. In the original Act it was thought wise to follow the lead of Boston and Baltimore, and to be conservative, in view of the experimental nature of the work, for which reason the mandatory provisions of the 1898 Act only applied to paintings, sculptures, and purely decorative works. Later, those mandatory powers were extended.

The following notes on the work of the New York Art Commission will probably be a sufficient indication of the establishment and working of similar Commissions in other cities of America:—The first few years were difficult. The Commission had no permanent quarters, and met in the homes and offices of various members (a usual and very undesirable condition with young Commissions and Civic Societies). In 1902, however, offices were provided in the City Hall, the Municipality took over the cost of administration, and at the same time an executive officer, clerk and typist were appointed. It was at this time that the jurisdiction of the Commission was extended to cover all public

structures built wholly or in part upon public land; also upon the lines, grades and plotting of public ways and grounds. The only exception being that when such structures cost 350,000 dollars or less, the Commission may be requested by the Mayor or the Board of Aldermen not to act. Such a request has never been made.

As the Commission showed willingness and ability to function effectively, it gradually became the custom for the Mayor to refer to it all *important* structures, and later practically *all* structures. Hence the various extensions of power already referred to, which have merely put into legal form what had already become a common practice.

During its first four years the Commission received an average of six submissions annually, but in 1907 (the ninth year) 168 submissions were dealt with, and in the year 1912, 263. Increases which tell their own story.

In conclusion of this section, it may be summarised that by 1912 there were seventeen Art Commissions in America, ranging in power from an advisory capacity (as in the case of the National Commission at Washington or that of the City of Charleston) to the fully organised New York Commission, which forms part of the City government, and has power to approve or disapprove both municipal and private projects.

In addition to the above, there is a Civic Association in America which represents the local activities of two hundred cities, but whether their programme of work is similar to that of the English Civic Societies I am unable to say.

I come now to that phase of civic betterment in this country which may be regarded as within the province of Civic Societies; and I believe I am right in saying that "The City Guild" of Liverpool, inaugurated in 1910, stands as the first body of this kind to be formed in England. The Guild apparently made a good start in membership, but during and since the war it does not appear to have been very active.

"The London Society," founded in 1912, has from the outset had the support of many very distinguished people, and of such public bodies as the Royal Academy, the Royal Society of Arts, the Royal Institute of British Architects, the Royal Society of Sculptors, the Surveyors' Institution and the Incorporated Society of Municipal Engineers.

In its first year, 400 members were enrolled, some of whom appear to have fallen away during the war, but in 1919-20 the membership more than doubled, and this rate of increase has probably been maintained, since it has been fully justified by the excellent work accomplished, including as it does the wonderfully interesting and useful Development plan and also the recently

published "London of the Future." With a subscription list in 1920 of £550 a year, and a life membership reserve fund of £536, the Society has apparently got well away from the cruder forms of financial difficulty.

Civic Societies now exist in Birmingham, Cardiff, Chesterfield, Glasgow, Leeds, Nottingham and Sheffield, and, I believe, in one or two smaller places. Some are just formed, some have been established four or five years, and some, no doubt, are more or less in that state of suspense which ensues when the warmth of good intentions is brought in contact with the apparently insoluble apathy of a Philistine public and its representatives.

A new Civic Society in the provinces has more than its share of difficulties. I suppose the number of other societies that fail to "make good," even when the objects in view are mildly or frankly selfish, must be very high. The professional Associations of provincial towns, for instance, with the automatic agenda of business happenings, are sometimes quite difficult to hold together; and it is naturally much more difficult to maintain an interest in the pursuit of abstract beauty. Yet if civic work of this kind is unusually difficult it is also usually important, and there are encouraging signs that the difficulties will rapidly grow less now that public opinion is veering towards an increased interest in urban amenity.

In the matter of policy, it may be noted that two methods of procedure are possible for Civic Societies: The public may be aroused by propaganda to require the support of their municipal representatives for a clearly defined policy favourable to amenity (a line of action which it is possible might involve some change of departmental personnel) or alternatively, they may work as an advisory body in association with existing conditions when those conditions are sufficiently friendly towards the objects in view.

The first method has certain obvious advantages and is much used in America, but English psychology and municipal conditions will usually suggest the second method for adoption in this country, if local authorities and their officials are sufficiently open to this sort of collaboration.

Speaking generally, we in Birmingham have been as fortunate in the reception of our overtures as we had any reason to expect, and our results are a tribute both to municipal administrative capacity and our own ability to put forward ideas in such practical terms that they deserve and receive respectful consideration.

The Birmingham Society (founded in 1918) has not so far aimed at a large membership. It was an early decision of the Council that we should test our opportunities and our ability to meet them before going to the public for support, and we have been able to do



this, largely by virtue of a grant of £300 a year from the Birmingham Common Good Fund.\* This grant to the Civic Society is made from year to year, and while it is not regarded by the Trustees nor ourselves as permanent, the probability is that it will continue while we need and deserve it.

Respecting the important matter of office equipment, those of you who saw Professor Abercrombie's article on "A Civic Society" in the *Town Planning Review* of April, 1920, may remember the following reference to the need for a full-time Secretary and independent quarters. He says: "It is absolutely essential for the work of the Society that there should be a permanent and paid Secretary, and an office, however small, should be obtained. It is a great mistake to attempt to make business men responsible for the secretarial work in connection with a Civic Society. Nor is a part-time Secretary sufficient; besides the purely secretarial work, there is the continuity of the Society's action, which can only be maintained and stimulated by having someone whose sole object it is to keep it going. The somnolence which has crept over certain Civic Societies can be directly attributed to this absence of a permanent Secretary, for when any job of work occurs, a committee of busy men is apt to find excuses for shelving it, if on their shoulders the burden alone falls. On the other hand, a few minutes of advice from these same members of the Committee is sufficient for the Secretary's guidance."

This is most true as regards offices, and in its first year the Birmingham Society took two rooms for Committee and Secretarial purposes, which we regard as a quite essential provision although a heavy charge upon our resources, but I am not sure that I agree with Professor Abercrombie with respect to the Secretary. We have failed with two, and the fault was not altogether, I think, with the Secretaries. My experience suggests that an honorary standing is almost essential when seeking interviews with influential men. In order to submit to them well-meant but unsought opinions; such interviewing, and many other matters, are urgent, and could not wait for council sanction, nor for the approval of a member of Committee; moreover, an extensive technical knowledge is of vital importance when making one's first approaches, in order to influence on the spot matters susceptible of alternative action. In these and other ways the professional Secretary is handicapped, so that I very much doubt his ability to maintain continuity of action, where there are no precedents to guide him, and no agreed or recurring order of work established. One

could say more on this matter, but it is enough for my present purpose, that partly for these reasons and partly because the Birmingham Society had need of the money for more urgent purposes, a typist was engaged in 1920 and all other secretarial business was given to the Hon. Secretary.

It now remains to preface my notes on the work of the Society by a statement of its general aims. These are as follows:—

- No. 1.—To stimulate historical interest in the city, and to preserve all buildings and monuments of historical worth.
- No. 2.—To preserve all objects of beauty and to maintain a vigilant opposition to all acts of vandalism.
- No. 3.—To promote a sense of beauty and to stimulate Civic pride in the domestic and civic life of the citizens by urging the adoption of the highest standards of architecture for domestic buildings, offices, warehouses, factories, etc.
- No. 4.—To work for a more beautiful city—
  - (a) By advocating the public acquisition of land for the provision of open spaces for recreative purposes, parks, parkways, squares, gardens and ornamental features at road crossings, etc.
  - (b) By assisting with advice any scheme or works controlled by public bodies, ranging from Town Planning to designs for parks, bridges, fountains, memorials, shelters, seats, lamp standards, tramway masts, and the like.
  - (c) By co-operating with the Education Committee and Training Guilds for the development of local art, and helping to co-ordinate the efforts of existing societies by uniting Architectural, Engineering, Artistic and Handicraft Groups in a common aim.
- No. 5.—In addition to influencing the work of others, to select suitable projects to be carried out by the Society itself.
- No. 6.—The Society shall seek to carry out these aims by means of newspaper and other propaganda, including Exhibitions, Lectures, Competitions, etc.

In working out this programme, contact with the City Authorities (other than that established by the Lord Mayor, as President, and the annual election of two members of the City Council to serve on the Council of the Society) has been kept green by the occasional purchase of open spaces for presentation to the city as recreative areas. The last purchase of 42 acres, adjoining Mr. Chamberlain's residence at Highbury having just been completed, the land being

\* A Municipal Trust established by Alderman George Cadbury in 1917, and controlling at that time an Endowment Fund and an Amenities Fund of £10,000 and £3,000 respectively. These amounts have since been very greatly increased.

conveyed to the city with an agreement that the Society is to be consulted in the lay-out and treatment of the grounds. These purchases were made possible by the generosity of anonymous Trustees who placed £15,000 at our disposal for this purpose in 1918.

From the first, the Society has worked hard to get every phase of recreation in the city co-ordinated and reduced to a system with a view to providing proper facilities for those areas at present neglected, especially in the centre of the city. A resolution to the Lord Mayor from one of several meetings resulted in invitations from the City Parks Committee to representatives of various organisations, to discuss our suggestions, and a Special Committee now exists to consider and report upon the whole question of recreation in its broader aspects, a work which is held up at present by lack of funds, the Trust money in our hands not being available for this purpose.

Another of our park activities is associated with a scheme for the special treatment of a road junction (agreed to by the Public Works Department), which includes the provision of a new entrance to our principal suburban park. Lord Calthorpe, the local landowner, is giving two corner sections of land (about one acre), and the Society has allocated £1,000 towards the cost involved in special features of the scheme. This work is likely to be carried out at an early date as part of an unemployment scheme.

Two Park Guides have been published, one of the Lickey Hills reservation, which is now in its third edition, and one of Sutton Park, recently issued; these guides are in great demand. We publish without profit. We exclude all advertisements, and we take pains to make these and our other publications carry the message of amenity which we exist as a Society to inculcate.

A gold medal is awarded annually by the Society to the author of the work judged to have added most to the recent amenities of the city. This award was intended originally to be given to the best street facade, but such a limited application would have resulted in far less significance for our award than it now has. The fact that the bronze medal of the R.I.B.A. is awarded to facades in London, is no authority for similar action in the Provinces. A sectionalism is necessary there; but in other than metropolitan areas such subdivision would be weakening, especially when practised by Civic Societies.

Our first award in 1921 went to Music, in the person of Mr. Appleby Matthews, conductor of the Municipal Orchestra, and our second to Mr. Barry Jackson in recognition of the high civic importance

and artistic distinction of his work at the Repertory Theatre. In each case the ceremony of presentation was given a definite civic character, and it is already evident that this public recognition of noteworthy service to the higher life of our city is warmly approved on all sides.

In such matters as the design of street decoration for public ceremony, the City Authorities willingly seek our aid, and sought our help when staging the Armistice Ceremony in 1921 and 1922. The scheme prepared by the Society for this occasion arranged the several factors of the *ensemble* in suitable relation to one another, leading naturally to a massed arrangement of coloured silks draped from the podium of the Town Hall to the ground, with a pedestal for floral tributes below, and a rostrum for the city's representatives under the colonnade above. Time, money and materials were short, but we succeeded in giving a dignity to the occasion which it had previously lacked. It is now quite usual for the Society to be consulted on occasions of similar character.

Another phase of our work is represented by a project for the preservation of the old village of Northfield, within the S.W. Birmingham town planning scheme. This work had the sympathetic support of the Public Works Department during its preparation, and the proposal eventually put forward now forms part of the town plan. Moreover, a photographic record of the village having been made, and its history written up, the work was published as one of our brochures.

Schemes of this kind have a practical importance to-day, for they illustrate very clearly the need for preserving such picturesque buildings, villages and natural scenery as remain about our cities at a time when rapid building developments may thoughtlessly destroy them.

I need do little more than indicate by name such obvious civic work and propaganda as the organisation of Exhibitions, Lectures on Civic subjects by first-class lecturers, Committee work on memorials and housing, work on smoke abatement, advertisement control; designs for street accessories, and an attempt to initiate peripatetic lectures in our Art Gallery. In these and similar matters we play our part, which for some of us means rather an appalling amount of work, for although our proceedings are as brief as we can make them, there is, nevertheless, much time spent in unavoidable debate that would be much better employed in producing the thing discussed if that were possible.

Perhaps our greatest work is the recently established



"Advisory Art Committee." The setting up of a Committee of this character was first put forward by the Birmingham Architectural Association in 1917, but, looking back upon that time, it is easy to see that circumstances were not then ripe for such an experiment.

The intervening five years of advocacy by the Civic Society have been years of increasing knowledge of municipal affairs on our part, and an indispensable preliminary to sympathetic co-operation with the City Authorities. It is evident, too, that in this interval of time a certain hesitation on the part of the City Council has changed to trust and goodwill, without which such a Committee as this could scarcely hope to be effective.

Nor do we imagine that the setting up of such a Committee is an end in itself. It exists as an instrument for work to be done, and the use we make of it will be the measure of our success.

The nature of the Committee is best understood from the clauses of its constitution, which have been recently amended and now read as follows:—

- (1) The Committee shall consist of not more than twelve ex-officio members, and shall have power to co-opt four additional members, who shall be selected for technical knowledge in art matters. The election of such members shall be made at the first meeting in the year, and they shall serve for not more than two\* years consecutively.

- (2) The following shall be ex-officio members of the said Committee:

The Lord Mayor, a representative of the Birmingham Public Works Committee, a representative of the Education Committee, the City Surveyor, the Vice-Chancellor of the University, the Principal of the University, the Director of the School of Art, the Director of the School of Architecture, the President of the Birmingham Architectural Association, the Chairman and the Hon. Secretary of the Civic Society.

- (3) The Committee shall elect a President and Hon. Secretary from its own members, whose term of office shall be for one year.
- (4) The Committee shall have power to adopt its own rules of procedure, and three shall form a quorum.
- (5) The findings of the Committee upon all matters submitted to it shall be in the nature of recommendations only.
- (6) The Committee shall hold all matters submitted to it in confidence; no matter referred to it

shall be divulged, and no report of its proceedings issued except by previous agreement with the Corporation Committee concerned.

- (7) The Committee shall in ordinary circumstances report upon any matter submitted to it within thirty-six days, provided that any submission after the 12th of the month shall be dated as received on the first of the month following, but shorter periods may be arranged with the Departments concerned for reports on urgent work, or an extension of time may be arranged where there is no urgency.

- (8) Hereafter all such new designs for public buildings, bridges, lamps, gates, fences, public conveniences, or other structures to be erected upon land belonging to the city, all such proposals for planning and laying out new parts or park extensions, all such new statues, fountains, arches, monuments or memorials of any kind to be erected in any public street, square, park or municipal building, as may be selected for submission to the Advisory Art Committee by the City Departments concerned, shall be reported upon by the Advisory Art Committee.

You will notice that we are still, as it were, on probation. The City Authorities reserve the right to accept our advice or not; they also submit their proposals to us at pleasure; but we are anxious to make no false step in a matter of such far-reaching importance, and it is for us to so prove our capacity by the advice we give that we shall accomplish out of deference to our wisdom that which we have no power to enforce.

Such new methods as these are best put in motion gradually, and if you recall my references to early caution and subsequent activity in America, you will see that we have taken an equally reasonable course, and that success is very largely our own affair.

Clause 6 of the Advisory Art Committee's constitution stipulates that no details of its work shall be divulged, but I may say in quite general terms that the spirit of co-operation between the Committee and the City Departments is excellent; that we already have much work to do; and that one of the greatest pleasures in doing this work comes from the knowledge that it has an immediate bearing upon actualities.

WILLIAM HAYWOOD,

Hon. Secretary Birmingham Civic Society,  
Hon. Secretary Birmingham Advisory Art  
Committee.

\* Length of time not yet finally agreed.

## SIR CHRISTOPHER WREN

BICENTENARY 1723-1923

Towards the end of February a memorial volume of Essays on the various aspects of Sir Christopher Wren's Life and Work will be published under the auspices of the Wren Bicentenary Grand Committee and the Royal Institute of British Architects.

Amongst the personnel of the Committee are representatives of the following Scientific, Learned, Municipal and Public Bodies:—

Canon S. A. Alexander (representing the Dean and Chapter of St. Paul's Cathedral); M.F. Cavendish Bentinck (British Museum); Major-General W. D. Bird (Royal Hospital, Chelsea); Mr. F. G. D. Drewitt (Royal College of Physicians); Sir Lionel Earle (H.M. Office of Works); Sir Banister Fletcher (Carpenters' Company); Mr. A. Gray (University of Cambridge); Mr. Josiah Gunton (Corporation of London); Sir W. Hale-White (Royal Society of Medicine); Sir T. G. Jackson, R.A. (Wadham College, Oxford); Mr. H. V. Lanchester (Town-Planning Institute); Dr. F. W. Pember (All Souls' College, University of Oxford); Sir Hercules Read (Society of Antiquaries); Professor Sir A. Schuster (University of London); Sir C. H. Smith (British Institute of Industrial Art); Mr. A. T. Taylor (London County Council); Dr. H. H. Turner (Royal Society); Mr. L. A. Turner (Art Workers' Guild); Mr. F. J. Walton (London Master Builders' Association); Sir Aston Webb, P.R.A. (Royal Academy).

The volume is intended to pay a tribute to the memory of Sir Christopher Wren two hundred years after the date of his death, and to contribute, by its publication, a gift to St. Paul's Cathedral Preservation Fund for the purpose of maintaining the stability of his greatest monument. The entire profits from the sale of the book will be devoted to this Fund. The appeal made last summer by the Dean and Chapter of St. Paul's for the sum of £100,000 for the preservation of the fabric was based upon the recommendation of a commission of five eminent architects and engineers, of which Sir Aston Webb, P.R.A., is the Chairman. The work, which began ten years ago, is briefly that of saving the Dome by strengthening the eight piers which carry it. The work on the South side of the Cathedral has been finished; but £60,000 is still needed.

Among British Architects Sir Christopher Wren has

won universal and immortal fame. He alone in the gallery of architects takes rank in the popular mind with the great geniuses of Literature, Art and Science who have come down to us from the past.

As a graduate of Wadham College, Oxford, he achieved in his early years a great reputation for his scientific attainments and inventions.

He was appointed Professor of Astronomy at Gresham College, London, in 1657, at the age of twenty-five, and four years later Savillian Professor of Astronomy at Oxford, and in the same year was appointed Surveyor-General to King Charles II's Works.

He was one of the original members of the Royal Society, and its President from 1680 to 1682.

It was the Great Fire, however, which destroyed the City of London in 1666, that opened the way to one who had not been especially trained as an architect to endow posterity with a more varied group of noble buildings than any other man of genius has created. The Churches of the City of London, the vast edifice of St. Paul's Cathedral, which he designed and built, his numerous Public and Private buildings are not only a monument to his fame—"lector si monumentum requiris circumspecte," as inscribed in the North Transept of St. Paul's—but have given to the City of London an individual architectural character, a skyline visible from any standpoint which permits of a general view of London, which differentiates its beauty from that of any other capital city in the world.

Wren's architecture is an imperishable page in the history of London. His works have become absorbed in the minds of its citizens for two centuries, and remain associated in their love and memory even when circumstances have drawn them to other parts of the world.

By the adoption of a specially made fine rag paper, which will retain its colour indefinitely, the use of Art paper with all its inartistic effects and speedy discoloration has been dispensed with. Special attention has also been paid to the method of binding, with a view to the volume remaining a permanent record.

The type used in the book will be a reproduction of the face cut by Claude Garamond in 1540, a characteristically beautiful sample of the work of this gifted typesetter.



Chapters have been contributed by the following well-known and authoritative writers:—

S. D. Adshead, Professor of Town-Planning, London University; Rev. S. A. Alexander, Canon and Treasurer, St. Paul's Cathedral; Somers Clarke, Late Surveyor to the Fabric of St. Paul's Cathedral; J. Alfred Gotch, F.R.I.B.A., F.S.A.; A. R. Hinks, F.R.S., Gresham Lecturer in Astronomy; Arthur Keen, F.R.I.B.A.; Mervyn E. Macartney, B.A., F.R.I.B.A., F.S.A., Surveyor to the Fabric of St. Paul's; A. Beresford Pite, M.A. (Hon. Cantab.), F.R.I.B.A., Professor of Architecture, Royal College of Art, South Kensington; A. E. Richardson, F.R.I.B.A., Professor of Architecture, London University; Sir William Schooling, K.B.E.; Arthur Stratton, F.R.I.B.A., F.S.A., Reader in Architecture, London University; Laurence Turner, Past Master, Art Workers' Guild; W. Henry Ward, M.A., F.S.A. With introduction by Sir Aston Webb, K.C.V.O., C.B., President of the Royal Academy, the whole work being edited by Mr. Rudolf Dircks, Librarian of the Royal Institute of British Architects.

It will contain reproductions in colour of a Portrait of Sir Christopher Wren by Sir Godfrey Kneller in the National Portrait Gallery, and one by Michael

Wright in the possession of the Royal Society. There will also be a number of coloured plates by well-known artists of the late seventeenth and early eighteenth centuries, facsimile reproductions of original letters and drawings of Sir Christopher Wren from the collections of the Royal Institute of British Architects, All Soul's College Library, Oxford, and from other sources; and numerous reproductions of engravings of a contemporary period in the possession of the British Museum.

As only a limited number of copies is being printed, intending subscribers, to avoid disappointment, should communicate with

*The Secretary,*

Royal Institute of British Architects,

9 Conduit Street,

Regent Street,

London,

England.

The Subscribers' Edition, bound in buckram, 30 dollars net; an Edition de Luxe, limited to 250 copies, 50 dollars net; and an edition bound in leather, limited to 25 copies, 150 dollars net.

## BICENTENARY OF SIR CHRISTOPHER WREN

10th January, 1923.

Dear Sir,—Your Council may be interested to know what we are proposing to do in connection with the celebration of the Bicentenary of Sir Christopher Wren next month.

Under the auspices of the R.I.B.A., a Grand Committee has been formed which contains official representatives of the great Universities, the principal learned and scientific societies, the Corporation of the City of London, the Government Departments which are specially interested in the subject, and a number of other bodies.

This Committee has arranged a programme, of which the following is a brief outline.

On Monday, February 26th, there will be a special commemoration service in St. Paul's Cathedral, and an address will be delivered dealing with the life of Sir Christopher Wren.

After the service the members of the Grand Committee will proceed to the Crypt and lay a bronze wreath on the tomb. This, we hope, will be fixed permanently to the wall beside the tomb with a suitable inscription.

In the evening there will be a Commemoration

Banquet attended by the members of the Grand Committee, members of the R.I.B.A. generally, and distinguished guests who are interested in the occasion. Instead of the usual after-dinner speeches, there will be three addresses on Wren's life and work, one delivered by the President of the R.I.B.A., Mr. Paul Waterhouse, the second by Sir Reginald Blomfield, R.A., and the third by Mr. Mervyn Macartney, Surveyor to St. Paul's Cathedral.

An exhibition of books, drawings, relics and portraits connected with Sir Christopher Wren will be on view in the R.I.B.A. Galleries for a fortnight.

A series of visits to Wren's principal buildings—St. Paul's Cathedral, the City Churches, buildings at Oxford and Cambridge, Greenwich Hospital, Chelsea Hospital, Hampton Court, and so on—will take place.

A special commemorative volume, containing many illustrations of Wren's work, and contributions specially written by a number of eminent authorities, will be published at the time of the celebration. All the profits from the sale of this volume will be devoted to the St. Paul's Cathedral Restoration Fund.

Faithfully yours,

IAN MACALISTER.

## SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS AND THE 44 HOUR PROCLAMATION

Trade	Hours.	Rate per hr.	Date from which rate takes effect.
Bricklayers .. .. .	44	2/5 <sup>3</sup> / <sub>4</sub>	Sept. 29, 1922.
Carpenters and Joiners .. .. .	44	2/4 <sup>1</sup> / <sub>8</sub>	Sept. 22, 1922.
Stonemasons (cutters) .. .. .	40	2/7 <sup>3</sup> / <sub>4</sub>	Sept. 29, 1922.
Stonemasons (setters) .. .. .	44	2/7 <sup>3</sup> / <sub>4</sub>	"
Stone Polishers .. .. .	48	1/11	Jan. 26, 1923.
Quarrymen .. .. .	40	2/6 <sup>1</sup> / <sub>4</sub>	Sept. 29, 1922.
Plasterers .. .. .	44	2/5 <sup>1</sup> / <sub>4</sub>	"
Plumbers .. .. .	44	2/4 <sup>1</sup> / <sub>8</sub>	"
Painters .. .. .	44	2/2 <sup>1</sup> / <sub>2</sub>	Sept. 22, 1922.
Slaters .. .. .	44	2/5 <sup>3</sup> / <sub>4</sub>	May 2, 1922.
Tilelayers .. .. .	44	2/5 <sup>5</sup> / <sub>11</sub>	Sept. 29, 1922.
Builders' Labourers (State) .. .. .	44	2/1 <sup>1</sup> / <sub>4</sub>	"
Pick and Shovel Men (State) .. .. .	44	2/0 <sup>1</sup> / <sub>4</sub>	"
(State Award, not members of Builders' Labourers' Federa- tion, and not working for respondents.)			
Builders' Labourers (Federal) .. .. .	44	2/1 <sup>3</sup> / <sub>4</sub>	Nov. 24, 1922.
(Members of Builders' Lab- ourers' Federation, under Federal Award)			
Electrical Mechanics .. .. .	48	2/0 <sup>1</sup> / <sub>8</sub>	Dec. 18, 1922.
Railway, Road, Bridge, etc., Labourers .. .. .	—	1/9 <sup>5</sup> / <sub>8</sub>	Jan. 26, 1923.
Crane Drivers .. .. .	48	2/6 <sup>1</sup> / <sub>2</sub>	Feb. 16, 1923.
Hoist Drivers .. .. .	48	2/4 <sup>1</sup> / <sub>2</sub>	"
Builders' Carters .. .. .	44	£4/3/6 (per week)	July 21, 1922.
Machinists (Gen. Joiners) .. .. .	44	£4/19/6	Jan. 27, 1923.
Machinists' Labourers .. .. .	44	£4/4/6	"
Bridge and Wharf Carpenters .. .. .	44	2/4 <sup>7</sup> / <sub>8</sub>	(Award Rate) Sept. 22, 1922.
" " " " .. .. .	44	2/5 <sup>5</sup> / <sub>8</sub>	Agreement .. .. .

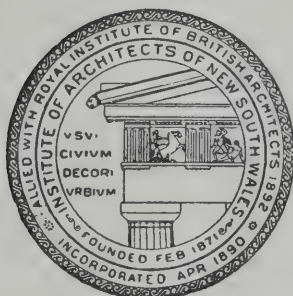
### Price of Materials.

Bricks (Common)—At Kiln, per 1,000 .. .. .	72/-	New Zealand White Pine and Rimu (6 in. wide) .. .. .	43/6
Cartage of bricks to site (as per current rate).		Richmond River or Hoop Pine .. .. .	55/6
Timber (Basic Prices):—		Cement—Per three bags (according to quan.) .. .. .	20/- to 22/6
Hardwood, per 100 ft. sup. .. .. .	34/-	The above prices, with the exception of bricks, are for city delivery.	
Oregon .. .. .	32/6		
Redwood .. .. .	70/-		



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



APRIL 16TH  
1923

VOL 12. No. 4

PRICE ONE SHILLING

# MINUTES OF AN ORDINARY GENERAL MEETING OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Held at 5 Elizabeth Street, Sydney, on Thursday, 15th March, 1923, at 8 p.m.

**Present.**—The President, Sir Charles Rosenthal, was in the chair, and twenty-five Members attended.

**Minutes.**—The Minutes of the Annual Meeting of 13th February, 1923, were mentioned, accepted, but confirmation was deferred.

## **Municipal Building Fees and Charges.**

Mr. W. de Putron spoke on this matter, and it was referred to next Council Meeting for action.

**Architects' Board.**—Mr. G. A. Roberts raised the question of the representation of the Institute on the Architects' Board.

The President was requested to obtain a ruling from the Minister.

ADDRESS BY MAJOR-GENERAL SIR  
CHARLES ROSENTHAL, K.C.B., C.M.G., D.S.O.,  
V.D., M.L.A.

## **President, Institute of Architects of N.S.W.**

March 15th, 1923.

Our Institute has entered upon the 52nd year of its existence. We remember its achievement and its shortcomings in the past. The good work done should be a definite incentive to further useful effort, and while the failures of days gone by will serve to remind us of human frailty, they will also inspire greater zeal and keenness. Difficulties are only made to be overcome.

In the year upon which we have just entered there will be many difficult problems to face, problems which in the facing will demand personal effort from every Member of our Institute, for it will only be by concerted and whole-hearted co-operation on the part of all—the old practitioners who have borne the heat and burden of the day, and the younger men now carving out their careers—that success can be achieved.

To-night I purpose making reference to some of the problems facing us as professional men.

Our first concern is naturally with the City of Sydney itself—no mean city, indeed—and one destined to hold an important place in the Empire. But while we are specially interested in our own capital city, we must also take a deep interest in the development of other cities, not only in our own State, but throughout the Commonwealth. In this development the Architect must occupy an important place.

Dealing with Sydney itself we must all realise the urgent necessity for a "Greater Sydney." Our

Municipal services are unduly duplicated, there is lack of co-ordination, money is wasted, and the general result is very unsatisfactory.

It may be argued that the question of a "Greater Sydney" is one for Municipal and Government Authorities alone; this I hold to be a mistaken idea; for Architects are first of all citizens, and their professional training qualifies them in a special degree to aid the development of their city.

Each day sees further opening up of our suburban areas; new sub-divisions are designed and approved by Local Authorities, but this natural and much-to-be-desired development is haphazard and is not leading up to the Consummation of a properly designed plan.

The "Greater Sydney" area has natural boundaries: Broken Bay and the Hawkesbury River on the north, the Nepean River on the west, Waterfall on the south and the Pacific Ocean on the east.

Two great parks flank the area—Kuringai Chase on the north and National Park on the south—both extensive areas, noted for rugged and beautiful scenery and gradually becoming the sanctuary for our flora and fauna.

Within this area, as I have already indicated, haphazard development is taking place.

The first and most urgent necessity in connection with a "Greater Sydney" area is a properly contoured plan.

With such a plan available, arterial roads can be laid down along lines which will mean economy in first cost, small maintenance charges, proper drainage and suitable datum lines from which new sub-divisions may be designed.

Further, the fullest advantage could thus be taken of the magnificent views everywhere obtainable within this area.

The City Council has just appointed a new City Surveyor from England—Mr. Weekes—whom, I am very pleased to note, holds, in addition to other qualifications, the Associateship of the R.I.B.A., and we may therefore hope in the near future to welcome him to our Institute as one of our own Members.

I hope Mr. Weekes will take the first opportunity of getting in touch with all Council and Shire Engineers in the area referred to with a view of at once proceeding with the preparation of the foregoing suggested contour plan.



Though there is at present no machinery which can be put into operation under the control of one man to achieve this desired result, I am sure the necessity for the work will be apparent to all our Local Government Engineers, and their whole-hearted support may be confidently expected.

Once the plan is prepared, and main arterial roads laid down, further development can proceed along lines which will give the best possible results.

Speaking of arterial roads, one is reminded that the outlets from Sydney to the north, west and south are far from satisfactory.

On the north we may expect in the near future to have a new highway to Newcastle, avoiding the long detour *via* Wiseman's Ferry. Here is a golden opportunity which it is hoped will not be missed.

The Parramatta Road will, I suppose, always remain the chief outlet to the Blue Mountains.

On the south the present outlet through Newtown to Cook's River is deplorable, and it is hoped that before long we shall have a new roadway to the South Coast, commencing at Anzac Parade, passing through practically virgin country to Cook's River, thence *via* Sans Souci to George's River. All these three outlets should be specially considered, and, under a "Greater Sydney" scheme, we could soon expect these highways to be properly made and planted.

While the "Greater Sydney" proposal is yet in the future, the Members of our Institute, both individually and collectively, can do much to hasten its consummation—not the least necessity being our own individual education in this direction.

In the near future I shall lay before the Institute a model showing the proposed "Greater Sydney" area, and the model will, I hope, do much to educate the public mind.

In the City of Sydney to-day there are several projected improvements upon which our Institute should make a pronouncement.

Perhaps the most urgent matter is the extension of Martin Place. I am well aware that there are many Members of our Institute who, for various reasons, are opposed to the extension, and I am quite prepared to admit that some of the reasons advanced demand careful consideration. I, however, hold that the advantages to be gained far outweigh any disadvantages, and I am therefore in full accord with the last proposal submitted by the City Council to the State Cabinet for the extension through to Macquarie Street.

The City Council has exhausted every means to secure financial assistance for this much-needed work.

It might reasonably have been expected that as the Government Savings Bank, a State building, is the lion

in the path, the State Cabinet should have contributed something to the cost, particularly as the City Council has now to pay a large sum each year to the Government towards the construction of the North Shore Bridge.

Such aid has been refused, and the City Council has now to face the whole burden itself.

The Lord Mayor is shortly to bring the matter before the Council again for what must be a final decision, and when the matter is next discussed I shall give my vote, as I have done previously, for the important work. I hope also that all Members of the Institute may back up those Members of the City Council who are fighting to have this improvement carried out.

Should the extension be authorised, it can be safely foretold that many magnificent buildings will be promptly erected, and our Architects will have such an opportunity as rarely comes their way.

When the Lord Mayor issues his minute on the matter I propose asking the Institute to consider it, and I hope, as a result, our Architects will unanimously support the scheme.

It will be remembered that some years ago William Street, from King's Cross to Elizabeth Street, was widened; the balance of the work from Elizabeth Street to George Street is now under consideration by the Council, and I feel sure will be early taken in hand. Here will be an opportunity for the Architect. I think it is matter for great regret that when William Street was widened it was not regraded. In my opinion the grade should have been on a straight line from the Museum to King's Cross, thus avoiding the deep depression now existing. We then might have seen our big business houses extending into William Street, but the opportunity for this improvement has now gone for ever.

The City Council is also endeavouring to improve conditions at the corner of Elizabeth Street and Hunter Street; Elizabeth Street must be continued in a straight line and thus do away with the very dangerous tram curve at the corner in question.

I personally hope the Institute will strongly support all three improvement schemes aforementioned.

Another matter to which I briefly referred on the night of my election as President, is the urgent need for an up-to-date Building Act for the City of Sydney. All Municipalities and Shires working under the Local Government ordinances are in a much better position than we are in Sydney, where we have a special—if obsolete—City Act.

I am hoping that during my term of office this matter may be finalised; and to this end I should be glad if all Members of the Institute who have, in the course of

their practice, discovered flaws in our present Act, will give us the benefit of their experiences.

I wish to say a word about our Australian Industries. As a natural-born Australian myself, I am keenly anxious that we build up within our Territory the industries necessary to our existence. During the years of war, when no ships could come to Australia from European countries, we were forced to buy largely from Japan and America, and, in the case of many articles in normal daily use, we were forced to go without.

We have the raw material and we should build up our own manufactures. Recently the Members of the Institute visited paint works in a suburb of Sydney, and I am sure all were most favourably impressed with the quality of the goods produced.

Is it too much to ask our Members to be patriotic in a practical way? Can we not, in our specifications, stipulate that Australian goods must always be used if at all obtainable? Do not let us keep Australian goods in the background because of old-time prejudices in favour of imported goods, but once having satisfied ourselves as to the quality and durability of the goods offered, let us stand always for Australian productions.

I am sure that the profession generally is appreciative of the fact that "Registration" is now an accomplished fact, and that almost at once certificates of Registration will be issued by the responsible Board. To many of our old Members great praise is due for their persistent efforts towards the end now achieved, and to them, and to us, as well as the general public, there must come a feeling of deep satisfaction that at last the reputable trained Architect is to be recognised, while the inefficient must add to his knowledge and pass a qualifying examination before being allowed to practice his profession.

It must also be very gratifying to the Members of our Institute to see so many students taking up the Architectural course at the University. Those of us who served our articles many long years ago, under very different conditions, appreciate more than the students of to-day do, the wonderful opportunities now given to them. In the years to come, those who were trained at our University, will be a very definite source of strength to this Institute.

During the currency of this year I hope to continue the practice of visits to important works allied to our profession. Such visits have a twofold value—in the first place, the knowledge gained by our Members the better fits them for the practice of their profession; and, in the second place, the visit of such a body as our Institute is a great encouragement to the manufacturers themselves.

Within the city itself there are many Municipal activities well worth inspection; for instance, the Power House at Ultimo and the Fruit and Fish Markets.

I purpose arranging a visit to Cataract Dam so that Members may learn first-hand something of the great problem in supplying Sydney with water. Members also will, I am sure, be interested in a proposed visit to Canberra, where, in the near future, it is hoped our Architects in Australia will have an opportunity to build up a magnificent city. On the occasion of both these visits arrangements will be made for the wives of Members to join the party. Also with Kandos and Portland Cement Works.

In accepting the position of President of this Institute, I realise I am taking up a hard task. Many worthy Presidents have preceded me whose work for the Institute will never be forgotten.

Ex-President Mr. Godsell, during his two years of office, put up a record for work in the Institute interests which makes the way of his successor very hard. Furthermore, I find that as I have my practice to rebuild as a direct consequence of an absence from Australia of 5½ years on active service, there are many of our Members who would have filled the Presidential Chair with much better results to the Institute and much more credit to themselves than I shall do, but I shall use my best endeavours to ensure that when my term of office is completed, the Institute may be able to look back upon a year of genuinely useful work accomplished.

Among our Members are some who have been in practice for many years, and have therefore gained much valuable experience. There are also younger men whose training has perhaps been gained under more auspicious circumstances, and who perhaps excel with the pencil and the brush. A combination of the two will give the best results, and if our Members, young and old, can bring their cumulative knowledge to bear on the Architecture of our city generally, success will be assured.

One last word. Do the various Institutes in Sydney—Architects, Surveyors, Engineers, etc.—pull their full weight in our community? If not, why not?

I hold very strong views regarding the responsibilities of our citizens generally; too few take any interest in public matters. As far as our Institute is concerned, our influence with the community will be in proportion greater as our Members take their place in the public life of our State. How few of our Members are to be found in Municipal or Parliamentary life! Yet is not their training such as would specially fit them for useful public service? As I have often publicly stated since my return from the war, we



have no right to accept all the privileges and blessings which come to us as Members of a British community if we are not also prepared to shoulder our share of responsibility.

The Architect in his professional capacity designs and builds. Designers and Builders in our public life were never more needed than to-day, and I close my address with an appeal to our Members not to live for themselves alone, but privately, and through this Institute, to make our city and State the better because of what they have done.

**The Vice-President, Mr. A. Spain**, proposed a vote of thanks to Sir Charles for his able address, which was supported by Mr. Sydney Jones, Mr. G. A. Roberts, Mr. J. J. Copeman, Professor Wilkinson, Mr. B. J. Waterhouse, Mr. J. A. Kethel, Mr. H. Vernon,

Mr. W. de Putron, and was carried with hearty acclamation.

**Other Business.**— During the evening other matters were brought up, such as the Canberra Competition, the Architects' Act, the Local Government Ordinances and the Sydney Regional Plan.

The Meeting closed at 10.15 p.m.

### COMPETITIONS

COMPETITION.	CLOSING DATE.	REMARKS.
N. S. War Memorial ...	—	Approved.
Victorian National Memoriam	30/6/23	Approved

## MEMBERSHIP IN THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Many inquiries are being made as to the qualifications for gentlemen who desire to be either Fellows or Associates of the Institute. For the purpose of ready reference clauses 5 and 8 of the Article of Association are now re-printed:—

Clause 5: Fellows shall be Architects who have attained the age of 30 years, and who have served articles for at least three years to a recognised practitioner, or otherwise can satisfy the Council as to their qualifications, and who have been engaged as principals for at least ten years in the practice of architecture, and have erected buildings of sufficient importance in the judgment of the Council. Provided that the Institute shall have power to declare that every person desiring to be admitted a Fellow shall be required to have passed such examination or examinations as may be directed by the Institute. But in special cases the Council shall have power to dispense with such examination or examinations.

Clause 8: Associates shall be persons engaged in the study or practice of architecture who have attained the age of 21 years, and have served at least three years' articles or otherwise can satisfy the Council as to training, and who have passed such examination or

examinations as may be directed by the Institute according to a standard fixed from time to time by the Council. Associates of the Royal Institute of British Architects, or of any other incorporated Association of Architects, which the Council may from time to time recognise as upholding a sufficiently high standard of qualification, may be admitted to ballot without being required to pass an examination. An Associate need not pass examination prior to election as Fellow.

### NOTICE

The time for receipt of Theses in the Federal Council Bronze Medal Competition, has been extended to 31st October, 1923.

Particulars appeared in December, 1922, Architecture.

# THE FEDERAL COUNCIL OF THE AUSTRALIAN INSTITUTES OF ARCHITECTS 1923 MEETING

Held at the Rooms of the Institute of Architects of N.S.W.

## RECORD OF PROCEEDINGS.

**First Day: Friday, 9th February, 1923, at noon.**

### Present.

Mr. G. H. Godsell (President) and Mr. B. J. Waterhouse, New South Wales; Mr. K. A. Henderson (President, R.V.I.A.) and Mr. P. B. Hudson, Victoria; Mr. L. Laybourne-Smith (President, S.A.I.A.) and Mr. C. W. Rutt, South Australia; Mr. A. H. Masters, Tasmania; Mr. G. Sydney Jones and Mr. W. Kenwood (acting), West Australia.

The President welcomed the delegates from other States. Messrs. Laybourne-Smith, Henderson and Masters responded.

**The President:** Before the Minutes are taken, I should offer you an explanation with regard to Queensland. It is with very, very great regret to me—and I am sure to every Member of the State Institutes—that the Queensland Institute is not represented here.

You will remember that last year Queensland was represented by a gentleman who, whilst in Melbourne, attended our Conference and also the Engineers' Conference. At that meeting Mr. Henderson and I told the gentleman representing Queensland (Mr. Wilson) that we should be delighted to meet the members of the profession in Queensland and do anything we could to assist them in their deliberations with regard to the fees and other matters that were troubling them, and in which they did not seem to see eye to eye with the other States. Representations were sent to them; letters were sent to them; they were asked for their contributions; and to no letter that was sent did they reply. I think I am correct in saying that we have not heard a word from Queensland since the time their delegate left to return to that State; neither have they paid their dues. Seeing that no answer could be got from them in any shape or form, it seemed impossible that they would have a representative here. Their contribution is quite a secondary consideration, if their members are earnest. The last letter addressed from this Council to them was on 9th June, 1922, and to it we have received no reply.

**Mr. Henderson:** You will recollect, Mr. President, that you notified me in some correspondence that we had together that Queensland was not being invited to this Conference, and you gave me the reason. I told you that I would be in Queensland before this Conference sat, and I would make a point of seeing the President of the Queensland Institute and try to obtain an explanation of what appears to be their rather extraordinary attitude. Unfortunately, my trip to Queensland was delayed, and it was only during the last four or five days that I visited that State. I then had a conference with the President of their Institute. Their delegate to our last Conference was Mr. Martin Wilson, junr., who is practising with his father as an Architect, and his father is the President for the time being of the Queensland Institute of Architects. And you will remember when the Conference sat in Melbourne that he strongly opposed the question of the revision of fees. In Queensland the fees are lower than ours are here, and he very much doubted whether the Queensland Institute would accept the scale of fees which the Federal Council revised and debated again at last Conference. The Queensland Institute had a general meeting of members after the last Conference and the Federal scale of fees was put to the members and rejected. The explanation I received of their failing to attend and to answer any correspondence is that they felt under the constitution of the Federal Council that in not adopting the resolution of the Federal Council they had automatically seceded from the Federal Council. It is a rather extraordinary attitude to take up, and I told the President of the Queensland Institute that the whole object of the Federal Council as at present constituted was to endeavour to get uniformity of practice throughout Australia in Architectural matters, and if that uniformity could not be got immediately, nothing would be gained by endeavouring to break down the body which was trying to secure uniformity by seceding from it.

**President:** I thank you for the explanation, which I appreciate. We will now take the Minutes.

Mr. Kenwood moved, and Mr. Waterhouse seconded, that the Minutes be taken as read. Carried.



The Hon. Treasurer's statement, as under, was adopted, on the motion of Mr. Henderson, seconded by Mr. Laybourne-Smith:—

Reconciliation between Credit Balance, £72/16/9, in Statement to December 31, 1921, and Credit, £62/13/6, reported in statement of March 3, 1923.

	£	s.	d.
To Balance .. .. .	72	16	9
„ South Australian Levy, 1921 .. ..	5	10	0
	<hr/>		
	£78	6	9

failure of our own State Government to arouse the Federal Government to a sense of its duty with regard to the designs for the Australian Pavilion at the Empire Exhibition until it was too late to do anything in the matter, then I can only say that I ought to have known I would fail.

	£	s.	d.
By Assistant Secretary—Petty Cash ..	1	3	3
„ Assistant Secretary—Fee .. ..	10	10	0
„ Auditor .. .. .	1	1	0
„ President's Petty Cash .. ..	2	19	0
„ Balance .. .. .	62	13	6
	<hr/>		
	£78	6	9

## RECEIPTS.

	£	s.	d.	£	s.	d.
To Transfer Commonwealth						
Bank, Sydney .. ..	62	13	6			
Less Charges .. ..	0	3	5			
	<hr/>			62	10	1
„ Levies—						
Tasmania .. ..	4	7	6			
West Australia .. ..	4	5	0			
New South Wales .. ..	26	10	0			
Victoria .. ..	18	15	0			
South Australia .. ..	5	17	6			
	<hr/>			59	15	0
	<hr/>			£122	5	1

## EXPENDITURE.

	£	s.	d.
By Photos, 1922 Meeting .. ..	4	11	6
„ Minutes Meeting .. ..	4	17	6
„ Printed Proceedings, do. .. ..	60	3	0
„ Typing .. ..	1	15	3
„ Stationery—New Letter Heads, etc. ..	3	7	6
„ Typing .. ..	5	0	3
„ Cable .. ..	0	12	0
„ Petty Cash, Postages, etc. .. ..	4	7	9
„ Cheque Book .. ..	0	5	0
„ Balance .. ..	37	5	4
	<hr/>		
	£122	5	1

**President:** The first matter arising out of the Minutes is the question of Canberra. I think that perhaps you have all been wearied with the correspondence that has passed between myself, as representing the Federal Council, and the various Members of Parliament whom I have attacked, or whom I have tried to convince, and the publicity we have given to the matter in the newspapers. Our trouble has been with Mr. Foster, who has been out for just one thing—that is, Socialism. The only thing that ever stirred Mr. Hughes in the matter at all was when they did not get my firm's cheque for the support of the National Party this year. That brought the Secretary up to see what was the matter, and I told him I was not going to support him, and had not the slightest intention of supporting Socialism; because the Departments had been enlarged for the purpose of carrying out the work departmentally and it has not been given to the Architects. I submit that I have tried to do what was right, but I have failed as far as the Federal Government is concerned, but when I compare that failure with the

I would gladly welcome suggestions from any member here as to how the Government should be approached and made to realise the position. If Mr. Foster is to be Minister for Works and Railways again I think we shall be back in the old position, but if there should be a change in the administration perhaps something may be done. You have all read the correspondence, and you do not want to hear it again, but it is here if you require it.

**Mr. Laybourne-Smith:** It seems that one of the reasons why the Prime Minister has failed at the present time is his objection to encouraging private enterprise and his wish to do everything departmentally. I think that all the Ministers in the late Ministry were the tools of Mr. Hughes, and I think that as the new Prime Minister is now coming into power it will be well to represent to him that if the country is to be made anything of it will have to be by private enterprise. I do not think that the past counts, and I think that perhaps the new Federal Cabinet will be able to do something for us.

**Mr. Masters:** The change certainly gives us an opportunity.

**Mr. Henderson:** My feeling in regard to this matter is that it is the biggest thing before the Architects of Australia at the present time, and it is the biggest thing which will be before the Architects of Australia for the next twenty years, and the only signs of salvation we have are the results of the last election. I believe the under-current of that election was a fight between democracy and bureaucracy, and I think from what we have seen in the papers in the last few days the tendency is to wipe out bureaucracy; if so, we have a chance. I think we will have a thoroughly well-educated Prime Minister, and I believe from what we have heard, we have in Dr. Earle Page a man who is out to see the fair thing done for the people of Australia. We will possibly have an opportunity within the next few weeks to approach the new Federal Government and to put the matter before them.

There is the opportunity for the Architects of Australia to build a beautiful city; it is an opportunity which does not come to any country in the world once in a hundred years, and we would be absolutely failing in our duty to Australia if we do not, as soon as we possibly can, and as many of us as possible, meet the Prime Minister and the Treasurer and put the case before them once more.

I do not think you need blame yourself, Mr. President, for the failure in the last twelve months. No one could have put more energy into the matter, but we were absolutely up against a stone wall of bureaucracy. That is my view.

**Mr. Kenwood:** The fight has been going on for 15 to 20 years, and I think we should fight a little longer, and I think we have a better chance now with the new administration than ever we had, especially if the Country Party lives up to its ideals.

**President:** I am very keen that when the next deputation waits upon the Prime Minister, that we shall have such an influential deputation in Melbourne, or wherever the meeting is to be, that he cannot refuse to receive it, and it must be heard. I would like to get the head of the Faculty of Architecture here, and we can be assured of the assistance of the gentleman who will probably be the next Minister for Customs, and I think that things may open up better. I would like to hear what everyone has to say on this matter, and would like a suggestion worked out for a deputation when the time arrives, so that we may know what the procedure is to be.

**Mr. Henderson:** Before we go further, there is a matter in regard to Item (e), correspondence with the Hon. Austin Chapman, who is one of the greatest

advocates for the establishment of the Federal Capital. I do not know what the correspondence was with Mr. Chapman.

**President:** Mr. Chapman and Mr. Pratten are spoken of as likely Members of the new Cabinet. Mr. Austin Chapman is right with us, and would turn the whole business over to the private Architects if he had an opportunity. Mr. Chapman went out of his way to ask a question in the House. I addressed a letter to Mr. Chapman, setting out our position, and he obtained a reply from Mr. Foster in which the latter carefully navigates round the question without giving us a reply.

**Mr. Waterhouse:** I would like to support everything that Mr. Henderson has said. This is a big question—the biggest thing perhaps that we shall have to deal with. Our President has worked very hard to achieve success; but quite apart from success or non-success, as it is the principle we are fighting for, it is the duty of the Federal Council to carry on the campaign. One of the weaknesses up to the present time has been that although we have one or two members of Parliament who are heartily in accord with our object, they were unable to bring the matter before the Prime Minister in the form we would like. He would naturally get a statement from the Minister of the Department, who would be influenced to a great extent by his own officers, consequently we have never been able to get the ear of the Prime Minister as we would have liked. I think we will now probably be able to do so, and in the Ministry we will have at least two men who are informed of all we are anxious to obtain. So now is the time and the opportunity for greater pressure, and we shall be able to do more than we have done in the past, which is, however, only due to it being superimposed on what we have already done.

If we can only get the ear of members, I feel sure we shall be able to show far greater progress. But even if we do not succeed, I feel we should still keep up the pressure.

Another point is that when we have the deputation it would not do any harm to show that we are supported in our attitude by the R.I.B.A. We know that is so, because we have had correspondence from them. I think that is the sort of point which will appeal to members and I would hope that before this Conference closes we arrange definitely when the deputation should take place, and make it as strong and as representative as possible.

**President:** We might get to the end of this matter at once and appoint a deputation to wait upon the Prime Minister.



**Mr. Laybourne-Smith:** May I say that we had similar subjects to deal with in South Australia, and I am quite certain architects, either in a deputation or as an institute, can make no impression on a Government, on account of the smallness of their numbers. After the deputation, the Minister asks, "How many architects are there in Australia?" and when he hears the number he does not go on with the matter. We have decided on a new policy. We have become officially members of the Chamber of Commerce, and I am the representative of our interests on the Chamber of Commerce. Now, when any question comes up that we want to bring before the Government, we are not going to attempt to bring it ourselves; we have got to convert the Chamber of Commerce, the Chamber of Manufactures, and the Taxpayers' Association, who are affiliated. Then the deputation will come from those bodies. We no doubt will have our own representatives on the deputation, but those bodies will represent to the Government any matter which they think affects the commercial community of the country, and will do it much more powerfully than the architects could. The Chamber of Manufactures will go to the Federal Government and put before the Government the fact that this socialisation of departments is disastrous, and that the creating of a technical department to do the architectural work of the country is disastrous. The Chamber will put it forward on broad principles and we will speak on technical grounds. I would like you to think that over. That is what we have done, and I do not think that the architects of South Australia will ever go back on that action.

**Mr. Waterhouse:** I think you ought to be congratulated in having secured the support of the Chamber of Commerce.

**Mr. Laybourne-Smith:** We feel that our Chamber of Commerce will represent any matter which we can prove to them is against the commercial interest of the community. We have only to take the case up and to put the figures before their Investigation Committee, and once we convince them they will go to the Government.

**Mr. Henderson:** On that matter I am not at one with Mr. Laybourne-Smith, because I feel that the electors have put in their spoke with regard to the commercialisation of departments. I think that what we have to go to the Government for is mainly the point we stressed last time before Mr. Foster, and that is with regard to the design. So far as the other side is concerned, you have Mr. Bruce there as Prime Minister, and you have Dr. Earle Page, both absolutely against Government enterprise of that description. Our experience in Victoria in regard to deputa-

tions has been absolutely the opposite of that of Mr. Laybourne-Smith. The Institute of Architects has never been more often to the Government than it has during the last two years, and more has been done from a legislative point of view for architects during the last two years than ever before. I feel that if we are going to the Government on this matter we are going more on the question of the design, and on the question of giving the architectural genius of Australia the opportunity to design a beautiful city for Australians for an Australian capital, than on the question of a Government department doing it. I think that we have a type of Government which is a protest against what was going to be done. I think that if we did join ourselves with these other bodies we would need to do an enormous amount of educating of them with regard to the principal questions we are going to the Government about.

**President:** There is no doubt that it was impossible to make the Minister for Works and Railways understand that a city should be designed throughout by an expert. He could not see that the whole lay-out and design and character of the work, from the labourer's cottage to Parliament House, could figure along on one line of beautiful work, which would harmonise throughout. The Minister would draw a fine design for a big building, but for the temporary buildings he would not care whether they were pigsties or what they were.

**Mr. Henderson:** That is why I stressed the point that we now have an educated Prime Minister.

**Mr. Hudson:** I would like to stress another point. Mr. Henderson did not mention we had a meeting on this subject yesterday at two o'clock of the Council of the Victorian Institute of Architects, and they heartily supported this movement to try and get this work thrown open to competition, and also in sympathy with regard to the competition which was called for the Federal Capital, which will come up later. But I do not think we should confine ourselves to the one question of one design; I think that we should make it a broad principle, first of all, to try and get Government works thrown open to private competition, on the principle that when there is competition throughout Australia they will get more varied ideas and better results. I think that we should go on that broad principle first and then come on to the question of the design regarding individual buildings of the Federal Capital. It is the principle we are fighting for, which other bodies of architects have been able to get in other parts of the world. I think if we work on the broad principle, the other things will follow afterwards.

**Mr. Henderson:** I think we should shoot straight for Canberra; if we get that we get everything. We have been shooting straight for Canberra for years. However, as to the exact *modus operandi* of the deputation, I personally think the matter should be put at the bottom of our business paper in order that we may see the developments in the Federal Cabinet in the next day or two. That is, I think the details should be considered before the close of this Conference.

**Mr. Masters:** I should like to say that I do not think our efforts in the past have been altogether wasted. I took a personal interest in the matter, interviewing and writing to candidates in Tasmania, and the replies which I got showed that they took an interest in the matter—one in particular who had been elected.

**President:** It is good to know that something comes out of these things, and I do feel that every Institute in the Commonwealth did its utmost at the time when I was distributing the literature on this subject to get it published and to get it into the right quarters. No doubt it would do some good and it must awaken the authorities to some extent. Therefore, they may be the better prepared to receive us next time and may be more sympathetic. But I certainly do agree with Mr. Henderson that if we could shoot straight for Canberra and get Canberra, and get in well there, the rest would follow. If you make an attack upon one thing you are more likely to succeed than if you go on a general scheme for a general principle to start with. I think we have an opportunity, with the right men in power and the right Cabinet, to obtain assistance. The last Cabinet was impossible; it was so impossible that although the Minister for Trade and Customs, Mr. Rogers, was addressed as far back as June last with regard to the Empire Exhibition, and in October he promised at a gathering of Master Builders that there should be a competition for the design of the Australian Hall amongst Australian architects, Mr. Farrar, the Minister for Labour and Industry in this State, sent for me in December and asked me what had been done in the matter, and when I told him and showed him the correspondence he at once advised me to write a letter, which I did through him; and he sent it by special messenger to the Commission, with a copy of the whole of the correspondence, showing how Mr. Rogers had neglected the work which he should have done. He would not trust Mr. Rogers at the meeting to tell the members of the Commission, but he sent a special messenger to put a copy of every document in the hands of every man who sat there, and then they sat back and said with a sigh (although at that date

I promised to get the best brains in Australia to work to conceive a first-class plan and send it home), "It is too late," and they sent Mr. Oakshott home to represent the Federal Government. That was after a pledge given to the Master Builders of Victoria. The moment I heard of it from Mr. Henderson I followed it up with a letter, and still further letters, and then all we could get back from Mr. Rogers was that it was too early then for it to be considered. Nothing had been done, and we told him it would be too late soon to consider it, and six weeks afterwards he announced that it was too late.

#### Afternoon Session: Friday, 9th February, 1923.

##### Scale of Professional Charges.

**President:** The next item on the agenda is the much-discussed matter of Professional Charges. Those of you who were present at the last Annual Conference will remember that this Council had prepared a scale of charges which each State undertook to use until such time as a scale should be fixed for the whole of the Commonwealth; that is to say, I mentioned at that time, and Mr. Waterhouse too, that we had taken advice with regard to the wording of the various clauses in connection with the scale of charges, and had taken good care that our new scale, which we had commenced to prepare—without knowing that the Federal Council were preparing a scale at that moment—should be founded on the very best possible lines, so that there should be no question of incomplete wording in connection with the various phases.

If I remember rightly, I think the Council considered that the Commonwealth scale should be in operation until this new scale was produced, when the matter was to be reconsidered at this meeting, having regard to the completeness of the scale of charges we had prepared. On those lines we went ahead and completed our scale of charges, although they are not in operation yet. We have adhered for the time being to the Commonwealth scale until we could produce this new scale which we printed as the new scale we proposed to adopt.

**Mr. Henderson:** Before you go any further, did not N.S.W. Institute, after the last Federal Conference in Melbourne in January last year, decide that they would not adopt the Commonwealth scale then prepared, but for the time being would stick to the State scale they were then using? I mean, they did not tentatively adopt the Federal scale, did they? I understood you had some difficulty.

**President:** We had a great deal of difficulty in regard to the matter.

**Mr. Laybourne-Smith:** I do not think the position as explained by you is quite what we have understood



it to be. This scale of charges, which was produced for slight amendment at the last meeting of the Council in Melbourne was a scale of charges drafted at the Federal Council five years ago, and has stood some slight amendments at each annual meeting from then until last year, and it has been adopted, we understood, by the State Councils throughout the Commonwealth.

**Mr. Masters:** More or less.

**Mr. Laybourne-Smith:** West Australia, unfortunately, does not send their delegate from West Australia as they should do, and we never get accurate information from them. If you look at the previous Minutes, at p. 37, you will see that right back in September, 1920, Mr. Sydney Jones moved for an amendment of the Federal scale of charges on behalf of N.S.W., which he got through; that is, he got 6 per cent. inserted in the old Federal scale in lieu of the existing 5 per cent., plus 1 per cent., which was there previously. So I think you should look at it from a different point of view than what you are. You should look upon the scale as binding upon all the Institutes in Australia; it has been issued by the Federal authority, and it is binding upon them, whether they admit it or not. You told us at the last meeting that you had this scale in course of preparation.

**President:** Yes, I did; and, if I remember, you said at the time that this scale was so well worded——

**Mr. Laybourne-Smith:** Your scale?

**President:** Yes.

**Mr. Laybourne-Smith:** We did not have the wording of that.

**President:** Pardon me; you had our scale drafted at the time, if I remember rightly, and we had taken very careful advice with regard to each clause in the scale, because there were many loop-holes, we found, for confusion.

**Mr. Laybourne-Smith:** In the Federal scale?

**President:** Yes. The great difficulty to get over in the Federal scale was the division of the percentage—that was the 1 per cent.

**Mr. Henderson:** The scale you say N.S.W. is about to adopt now was in the hands of your legal advisers about the time of the Federal Council meeting?

**President:** Yes.

**Mr. Henderson:** And I understood N.S.W. decided not to adopt the Federal scale but agreed for the time being to work on the N.S.W. scale. So far as I know, South Australia, Victoria, and, I believe, Tasmania have absolutely adopted the Federal scale. Queensland has refused to accept the Federal scale because they only take 5 per cent. for their work altogether. N.S.W., at present, I understand, is operating under

its 6 per cent. scale which it had prior to the 1922 Conference. I do not know the West Australia position at all.

**Mr. Sydney Jones:** Five per cent. and 1 per cent. from the builder.

**Mr. Henderson:** So that if everybody took up the position of Queensland there would be three secessions from the Council.

**Mr. Waterhouse:** I think it might be as well, before we go further, to clear up the position. Mr. Henderson has mentioned as to what was the actual attitude of this Institute. When we returned we put before our Institute the position, in all good faith, to get the Federal scale of charges accepted. It was very difficult in one meeting to get the members to see the drift of it all. Various suggestions were made, and one was that the Federal scale of charges be adopted *pro forma*, to take effect after the next Federal Council. Finally, a resolution was proposed and seconded, "That this Institute endorses the acceptance by the States of Victoria, South Australia and Tasmania of the Federal scale of charges approved by the delegates of those States until the N.S.W. code of charges now under revision has been considered, and, it is hoped, adopted by the other States as the Federal code of charges. Members of this Institute to continue to operate in accordance with the code of charges of the Institute of Architects of N.S.W." That amendment was seconded and carried on the voices. That is practically the way the matter stood at that time. It was fully pointed out there, and then thought that, ultimately, this revised code of charges would become the code of charges for the whole of the States, feeling that within it everything that had been suggested in the Federal code of charges was adopted, in perhaps a more complete way.

**Mr. Laybourne-Smith:** There is one thing we had better realise from the very start, in the matter of this Federal Council, and that is, that if the resolutions of the Federal Council are not properly dealt with by the Institutes after the meetings, we shall simply get into a state of chaos. We amended the whole of the scale of charges for the Institutes entirely upon the motion of Mr. Sydney Jones at Melbourne; he came down and persuaded us to change the 5 per cent. to the 6 per cent. and to adopt all these matters which he said were bones of contention in Sydney. We did that, and we had to educate every one of our Institutes. West Australia, I have been informed, has done it also. Some have adopted the scale simply because it is in our book, and we are charging the six per cent. If Mr. Sydney Jones went off to Sydney after getting his resolution carried, as you will see on p. 37 of the

Minutes of Proceedings of the Federal Council, 1922 Edition, that he did, and N.S.W. perseveres with its own scale after that date, it simply means undermining the authority of the Federal Council altogether.

**Mr. Rutt:** And you create a sense of insecurity. In South Australia we had a big fight to get this thing adopted in accordance with the suggestion made by Sydney, which we understood was the difficulty right from the start—the extra one per cent. was the bone of contention.

**President:** There is no question how the six per cent. is charged, but, speaking from memory for the moment, the scale of charges as drafted by the Federal Council prior to our meeting last year was not, in the opinion of the N.S.W. Council, complete, and they considered that they had a more complete scale under revision; and although the principles of the scale were the same, the sub-division of fees differed slightly. That is the only thing, excepting that there is better wording and better protection for the architect under this scale than there is under the Federal scale, if comparison is made paragraph by paragraph and carefully considered.

**Mr. Rutt:** I would like to point out that this scale of Federal charges was not only drafted by the Federal Council but approved.

**President:** When?

**Mr. Rutt:** Years ago. There have been amendments of it each time we met.

**President:** Both Mr. Waterhouse and myself have stated what our scale of charges were and that we were drafting a fresh one, and, according to my memory, it was agreed that the scale of charges that we were preparing, on which we spent considerable time and money in order to obtain the best legal assistance, would supercede the scale the Federal Council had adopted and would be a better scale of charges. I believe if you look at the scale and compare it, item by item, with the Federal scale, you will find it a more complete scale than the Federal scale. I think you will go further, and you will find that it will be in the interests of the profession to adopt it.

**Mr. Henderson:** The position to my mind boils down to this. I viewed with considerable dismay the attitude of New South Wales, for which I know you are not responsible, Mr. President; I mean, you did your best, I take it—and I am confident you did your best, when last February we again looked over the Federal scale and made a few minor amendments in it, to get your Institute to adopt that. I think that the position would have been infinitely easier all round if your State Institute had for the time being adopted the Federal Council's scale, which was revised last

February, and at the same time expressed a hope that the matter would come up for revision and amplification and alteration to give greater security to the architect at the Conference in 1923. We wonder where we are sometimes. It was not an easy matter in our State to get some of our architects to drop the old system of charging the builder one per cent., though, to my mind, it was a most objectionable practice, and two years ago I got a resolution from them that it would be desirable to alter the system, and that made the change easier. We have definitely changed over to the Federal Council's scale, and we have notified every builder that architects cannot collect that one per cent. The matter now coming up is the suggestion from New South Wales, asking the Federal Council to scrap its scale in favour of the New South Wales scale. If that is the case, it seems that the best thing we can do is to lay the Federal and New South Wales scales side by side and see if, in the opinion of the Conference as a whole, we are getting any better goods. I do not think that the Federal scale is perfect and I have not had the opportunity of placing the two side by side and comparing them. Whether we do that this afternoon or take them away and consider them between now and Monday, I do not mind, but I am not going to act hurriedly, and if it comes to giving perhaps a quarter of an hour's attention to the matter I should stick to the Federal scale.

**President:** I am with you there, and I am sure that we are all with you that this matter should be carefully considered.

**Mr. Henderson:** If we, as rational men, can get something better, by all means let us get it.

**Mr. Rutt:** Yes; the only thought in my mind was that the way the thing was dealt with caused some misapprehension because as far as we were concerned in South Australia we got this passed with some trouble. Some architects were very averse to charging the client more than five per cent.; they thought it was going to stop building and all sorts of things, but they passed it and approved it on the recommendation and approval of this Council, and we naturally thought it was settled. Then for any one Institute—I do not care which Institute it is—to bring up another scale—well, we might logically have four or five different scales.

**President:** I would like to make a little explanation at this point. I do not want it to be thought that New South Wales does not appreciate what Victoria and the other States did in raising their charges and coming into line with the general scheme, and I do not want it to be thought that New South Wales said: "We have got them by the wool and they have done



so much and now we will push them a little further." That was not in the mind of this Council at all—I am speaking for my own Institute. It was this, that we had gone so far in taking advice in respect to our charges; we had had a committee sitting so long drafting it clause by clause and getting it perfected with the lawyers, and it seemed to be such a complete scale that we were going to suggest in all modesty that there was a scale which the Commonwealth scale might advisedly be altered to meet with and the profession would be better off for such an action. We have, I suppose, one of the finest advisors one could possibly have in Mr. Simpson, who is admittedly the man in building and architectural work in all its phases, as far as legal advice is concerned, and a very shrewd man who has given a great deal of time and trouble to it. Therefore, if Mr. Henderson suggests it would be well that we should take home and consider a copy of each scale of charges, so that on Monday we can say what we think; whether we stand for the Commonwealth scale as printed or whether it should be modified or altered to meet this scale, or whether the New South Wales scale should be turned down to meet the Commonwealth scale, I think it would be time very well spent.

**Mr. Henderson:** I want you to realise one of the difficulties we are under. We decided in Victoria to make the radical change after a certain date, and we said: "All tenders closing after that date will not bear the one per cent. charge." In all our metropolitan press on the one day we had an article in regard to the change. We had a circular letter drafted, to be sent by architects to their clients, and thousands of copies in book form to be sent to clients. Within a few months of that, if we turn the whole thing upside down at this Conference, then so far as our clients are concerned, we are going to do the whole thing again. It is unsettling, to say the least of it.

**Mr. Masters:** The Tasmanian attitude is that there is not likely to be any opposition to the adoption of this or any other scale, but they take exception to changes being made too often. Two years ago I was deputed to make certain alterations in the scale drafted at that time, but in some cases we were overruled. However, Tasmania fell in loyally with the whole of the charges and adopted them for the sake of uniformity. Last year I was again asked to make

a few slight alterations, and Mr. Laybourn-Smith will remember it was thought better then, in view of the fact that N.S.W. Institute was re-drafting the scale under legal advice, to leave any of those small alterations until the whole thing came up for proper revision again. Just lately the Federal scale of charges has been adopted, and has come into general use in Tasmania at the beginning of this year. It is printed in our proceedings, circulated to all the members, and advertised in the Press. The feeling over there is that if any change is to be made it should not come into force for some time to come. That is, they do not like, after having adopted the scale, to change it immediately.

I think that the best course would be to compare the scales side by side. Personally, I have not done that. The feeling in Tasmania is, that as this has now been finally adopted, they do not want it upset too soon, and even if the Council decided upon an alteration the matter of bringing it into effect might be deferred, or N.S.W. might go on with it until it was made a Federal measure.

**Mr. Hudson:** So far as Victoria is concerned, it is going to be a very, very awkward position for us. As Mr. Henderson has explained, in the last two or three months we have gone to a good deal of expense and trouble in circulating information broadcast throughout Victoria, mainly based on the understanding that the scale of charges had been adopted by the Federal Council. We have advertised throughout Australia that these were to be the uniform charges. I should strongly urge New South Wales, if there is not any very great difference in the charges, to adopt the Federal scale of charges for the next couple of years to come at least. It seems to me that if we were to send out a new scale of charges at a great deal of expense and trouble (which we would not mind so much), it would affect our status in Victoria very considerably.

One thing I noticed in the charges at a first glance, on contracts under £2,000 there is a range of 10 per cent. on a graduating scale. That is a very radical change. I think that alterations of that sort would very considerably affect South Australia and Victoria; Tasmania would also be affected in a similar way.

**Mr. Rutt:** We altered our conditions of contract also.

(To be Continued)

# INSTITUTE OF ARCHITECTS OF N.S.W.

*Council and Committees for 1923-1924.*

COUNCIL (elected 13/2/'23).

*President:*

GENERAL SIR CHARLES ROSENTHAL, F.I.A., F.R.I.B.A., K.C., C.M.G., D.S.O.,  
8A Castlereagh Street. B3303.

*Ex-President:*

Mr. G. H. GODSELL, F.I.A., 14 Martin Place. City 9970.

*Vice-President:*

Mr. A. SPAIN, F.I.A., F.R.I.B.A., 10 Spring Street. B4619.

*Hon. Secretary:*

Mr. H. C. DAY, F.I.A., 3 Spring Street. B1323.

*Hon. Assistant Secretary:*

Mr. L. C. McCREDIE, A.I.A., Messrs. Robertson and Marks, 14 Martin Place. City 9970.

*Hon. Treasurer:*

Mr. J. PEDDLE, F.I.A., 226A George Street. B2536.

*Councillors:*

Mr. W. DePUTRON, F.I.A., 17 Martin Place. B1264.	Mr. B. J. WATERHOUSE, F.I.A., 17 Bligh Street. B5268.
Mr. E. A. SCOTT, F.I.A., 115 Pitt Street. B9204.	Mr. R. KEITH HARRIS, A.I.A., A.R.I.B.A., 72B King Street. B619.
Mr. H. V. VERNON, F.I.A., 38 Martin Place. B3614.	Mr. J. D. MOORE, A.I.A., A.R.I.B.A., 72B King Street. B619.
PROFESSOR L. WILKINSON, F.I.A., F.R.I.B.A. City 9587. (School of Architecture, University, Sydney.)	

*Practice.*

Mr. E. A. Scott, F.I.A., 115 Pitt Street. City 9204.  
Mr. T. F. Cosh, F.I.A., 18 Spring Street. B4619.  
Mr. R. V. Minnett, F.I.A., 12 Loftus Street. B1056.  
Mr. A. Lanyon Clark, A.I.A., 81 Elizabeth Street. B3078.  
Mr. S. M. Mould, F.I.A., A.R.I.B.A., 85 Pitt Street. City 3326.  
Mr. J. Peddle, F.I.A., 226A George Street. B2536.  
Mr. S. G. Thorp, A.I.A., 226A George Street. B2536.  
Mr. J. A. Kerr, A.I.A., A.R.I.B.A., Hon. Sec., 4 Bridge Street. B5649.

*Journal and Sessional Papers.*

Mr. B. J. Waterhouse, F.I.A., 17 Bligh Street. B5268.  
Mr. J. Barr, F.I.A., F.R.I.B.A., Gordon Road, Lindfield. J2258.  
Mr. N. Carter, 76 Pitt Street. B4310.  
Mr. R. Keith Harris, A.I.A., A.R.I.B.A., 72B King Street. B619.  
Mr. G. Sydney Jones, F.I.A., A.R.I.B.A., 113 Pitt Street. B3974.  
Mr. L. C. McCredie, A.I.A., 14 Martin Place. City 9970.  
Mr. Allan Gerard, A.I.A., School of Architecture, University. City 9587.

*Education and Examination.*

Mr. G. Sydney Jones, F.I.A., A.R.I.B.A., 113 Pitt Street. B3974.  
Mr. B. Hadley, F.I.A., Lecturer-in-Charge, Dept. Architecture, Technical College, Harris Street. M2572.

Mr. S. M. Mould, F.I.A., F.R.I.B.A., 85 Pitt Street. B3326.  
Mr. A. F. T. Somerville, F.I.A., 17 Bligh Street. C815.  
Mr. B. J. Waterhouse, F.I.A., 17 Bligh Street. B5268.  
Professor Wilkinson, F.I.A., F.R.I.B.A., School of Architecture, University, Sydney. C9587.

*General Purposes and House.*

Mr. B. J. Waterhouse, F.I.A., 17 Bligh Street. B5268.  
Mr. J. N. Hoare, A.I.A., 14 Martin Place. City 11796.  
Mr. S. M. Mould, F.I.A., 85 Pitt Street. City 3326.  
Mr. H. V. Vernon, F.I.A., 38 Martin Place. B3614.  
Mr. L. C. McCredie, A.I.A., 14 Martin Place. City 9970.

*Materials.*

Mr. R. Keith Harris, A.I.A., A.R.I.B.A., 72B King Street. City 619.  
Mr. J. P. Power, F.I.A., Bank N.Z. Chambers, Wynyard Street. City 4159.  
Mr. B. J. Waterhouse, F.I.A., 17 Bligh Street. B5268.

*Town Planning, Housing and Competition.*

Mr. B. J. Waterhouse, F.I.A., 17 Bligh Street. B5268.  
Mr. H. O. Jackson, F.I.A., Sydney Harbour Trust. City 9490.  
Mr. G. Sydney Jones, F.I.A., A.R.I.B.A., 113 Pitt Street. B3974.  
Mr. J. C. R. Mills, A.I.A., A.R.I.B.A., 38 Martin Place. B3614.  
Mr. W. O. England, A.I.A., 17 Castlereagh Street.  
Mr. E. R. Green, A.I.A., A.R.I.B.A., 115 Pitt Street. City 9204.



Mr. L. C. McCredie, A.I.A., 14 Martin Place. City 9970.

Mr. J. D. Moore, A.I.A., A.R.I.B.A., 72B King Street. City 619.

Mr. S. M. Mould, F.I.A., A.R.I.B.A., 85 Pitt Street. City 7685.

Professor L. Wilkinson, F.I.A., F.R.I.B.A., School of Architecture, University, Sydney. City 9587.

*Finance.*

Mr. J. Peddle, F.I.A., 226a George Street. B2536.

Mr. A. W. Anderson, F.I.A., 7 Bridge Street. City 9063.

Mr. G. W. Durrell, F.I.A., 14 Castlereagh Street. B2938.

Mr. G. L. Grant, F.I.A., 19a Elizabeth Street. B2942.

Mr. E. A. Scott, F.I.A., 115 Pitt Street. City 9204.

Mr. H. V. Vernon, F.I.A., 38 Martin Place. B3614.

*Pritchard Trust.*

Mr. G. H. Godsell, F.I.A., 14 Martin Place. City 9970.

Mr. L. T. Courtenay (M.B.A.).

Mr. W. F. Foster (M.B.A.).

Mr. D. T. Morrow, F.I.A., 17 Martin Place. B1264.

Mr. Finlay E. Munro (M.B.A.).

Mr. G. Sydney Jones, F.I.A., A.R.I.B.A., 113 Pitt Street. B3974.

Mr. B. J. Waterhouse, F.I.A., 17 Bligh Street. B5268.

Mr. N. Phelps Richards (Hon. Sec., M.B.A.).

*Quantity Surveyors—Institute Members.*

Mr. A. W. Anderson, F.I.A., 7 Bridge Street. City 9063.

Mr. E. R. Green, A.I.A., A.R.I.B.A., 115 Pitt Street. City 9204.

Mr. H. C. Kent, F.I.A., F.R.I.B.A., 58 Pitt Street. B4123.

*Hon. Librarian.*

Mr. B. J. Waterhouse, F.I.A., 17 Bligh Street. B5268.

*Hon. Assistant Librarian.*

Mr. E. O. M. Rowlinson, F.I.A., Institute of Architects 5 Elizabeth Street. B4915.

*Commonwealth Engineering Standards Association.—Cement Sectional Committee.*

Mr. J. Peddle, F.I.A., 226a George Street. B2536. (Institute Representative.)

*Delegate at R.I.B.A.*

Mr. H. C. Corlette, F.R.I.B.A., c/o R.I.B.A., London. *Local Government Advisory Committee.*

Mr. J. Peddle, F.I.A., 226a George Street. B2536.

Mr. R. W. Pickering, F.I.A., 247 George Street. City 4520.

Professor L. Wilkinson, F.I.A., F.R.I.B.A. City 9587.

*Official Acting Secretary.*

Mr. E. O. M. Rowlinson, F.I.A. B4915.

Private address:—"Cricklewood,"

Boyce Road,

Priv. 'Phone: Rand. 2486.

South Randwick.

## INSTITUTE LIBRARY

*Library Rules for Borrowers.*

1. If a book is lost or stolen from a borrower, or if the same is not returned by him within fourteen days, from the date of issue, he shall replace it, or pay to the Council the full value of such book. In case of the book being part of a set or series, and the borrower neglecting to return the same within fourteen days as aforesaid, or being unable to replace the same, in consequence of its having been lost or stolen, he shall pay to the Council the full value of the whole set or series.

2. A borrower shall keep the books borrowed by him from the Library clean and in good condition, and

shall not tear, nor turn down the leaves, nor mark, nor deface, damage, or injure the book in any way.

3. If a book is torn, damaged, marked, defaced, or injured while lent to a borrower, such borrower shall, within one week of notification from the Council, replace the book, or pay to the Council the full value of the book; or, in case it is part of a set or series, and he shall not replace the said book, the full value of the whole set or series.

In cases where the book is replaced the borrower shall be entitled to the injured book.

4. A borrower shall be entitled to borrow only one book at a time, but at the discretion of the Council two volumes of one work may be issued at the same time.

5. A borrower shall return any book borrowed at the latest within fourteen days after the date of issue; but books may be renewed upon application at the discretion of the Council.

6. If a book is not returned within the time prescribed by the preceding rule, the borrower shall pay the sum of sixpence for each and every day the book is retained beyond the prescribed time.

7. Certain volumes may not be removed from the Library, and are for reference only.

### THE COMMON ROOM.

The COMMON ROOM at the INSTITUTE OF ARCHITECTS is available for Arbitrations, Consultations and the like.

*Terms on application to the Secretary.*

# SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS

## AND THE 44 HOUR PROCLAMATION

Trade	Hours.	Rate per hr.							Date from which rate takes effect.
Bricklayers .. .. .	44	2/5 <sup>3</sup> / <sub>4</sub>	..	..	..	..	..	..	Sept. 29, 1922.
Carpenters and Joiners .. .. .	44	2/4 <sup>1</sup> / <sub>8</sub>	..	..	..	..	..	..	Sept. 22, 1922.
Stonemasons (cutters) .. .. .	40	2/7 <sup>3</sup> / <sub>4</sub>	..	..	..	..	..	..	Sept. 29, 1922.
Stonemasons (setters) .. .. .	44	2/7 <sup>3</sup> / <sub>4</sub>	..	..	..	..	..	..	"
Stone Polishers .. .. .	48	1/11	..	..	..	..	..	..	Jan. 26, 1923.
Quarrymen .. .. .	40	2/6 <sup>1</sup> / <sub>4</sub>	..	..	..	..	..	..	Sept. 29, 1922.
Plasterers .. .. .	44	2/5 <sup>1</sup> / <sub>4</sub>	..	..	..	..	..	..	"
Plumbers .. .. .	44	2/4 <sup>1</sup> / <sub>8</sub>	..	..	..	..	..	..	"
Painters .. .. .	44	2/2 <sup>1</sup> / <sub>2</sub>	..	..	..	..	..	..	Sept. 22, 1922.
Slaters .. .. .	44	2/5 <sup>3</sup> / <sub>4</sub>	..	..	..	..	..	..	May 2, 1922.
Tilelayers .. .. .	44	2/5 <sup>5</sup> / <sub>11</sub>	..	..	..	..	..	..	Sept. 29, 1922.
Builders' Labourers (State) .. .. .	44	2/1 <sup>1</sup> / <sub>4</sub>	..	..	..	..	..	..	"
Pick and Shovel Men (State) .. .. .	44	2/0 <sup>1</sup> / <sub>4</sub>	..	..	..	..	..	..	"
(State Award, not members of Builders' Labourers' Federa- tion, and not working for respondents.)									
Builders' Labourers (Federal) .. .. .	44	2/1 <sup>5</sup> / <sub>4</sub>	..	..	..	..	..	..	Nov. 24, 1922.
(Members of Builders' Lab- ourers' Federation, under Federal Award)									
Electrical Mechanics .. .. .	48	2/0 <sup>1</sup> / <sub>8</sub>	..	..	..	..	..	..	Dec. 18, 1922.
Railway, Road, Bridge, etc., Labourers .. .. .	—	1/9 <sup>5</sup> / <sub>8</sub>	..	..	..	..	..	..	Jan. 26, 1923.
Crane Drivers .. .. .	48	2/7 <sup>1</sup> / <sub>2</sub>	..	..	..	..	..	..	Feb. 16, 1923.
Hoist Drivers .. .. .	48	2/4 <sup>1</sup> / <sub>2</sub>	..	..	..	..	..	..	"
Builders' Carters .. .. .	44	£4/3/6	(per week)	..	..	..	..	..	July 21, 1922.
Machinists (Gen. Joiners) .. .. .	44	£4/19/6	" "	..	..	..	..	..	Jan. 27, 1923.
Machinists' Labourers .. .. .	44	£4/4/6	" "	..	..	..	..	..	"
Bridge and Wharf Carpenters .. .. .	44	2/4 <sup>7</sup> / <sub>8</sub>	..	..	..	(Award Rate)	Sept. 22, 1922.	..	"
" " " " .. .. .	44	2/5 <sup>5</sup> / <sub>8</sub>	Agreement	..	..	..	..	..	"

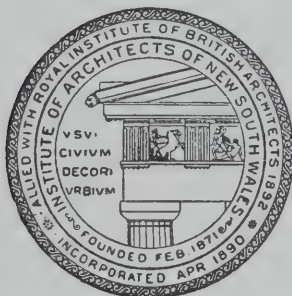
### Price of Materials.

Bricks (Common)—At Kiln, per 1,000 .. .. .	72/-	New Zealand White Pine and Rimu (6 in. wide) .. .. .	43/6
Cartage of bricks to site (as per current rate).		Richmond River or Hoop Pine .. .. .	55/6
Timber (Basic Prices):—		Cement—Per three bags (according to quan.) .. .. .	20/- to 22/6
Hardwood, per 100 ft. sup. .. .. .	34/-	The above prices, with the exception of bricks, are for city delivery.	
Oregon .. .. .	35/-		
Redwood .. .. .	70/-		



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



MAY 15TH  
1923

VOL 12. No. 5

PRICE ONE SHILLING

# MINUTES OF AN ORDINARY GENERAL MEETING OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Held at 5 Elizabeth Street, Sydney, on Tuesday, 10th April, 1923, at 8 p.m.

**Present.**—The President, Sir Charles Rosenthal, in the chair, and thirty-five members attended.

**Minutes.**—The Minutes of the Ordinary General Meeting of the 15th March, were taken as read and confirmed.

**Apologies.**—Apologies were received from Messrs. Hurst, Vernon and Minnett.

**New Members.**—Messrs. H. B. Chisholm and J. K. Shirley attending for the first time since their election, were welcomed by the President.

A discussion took place regarding registration and representation.

Mr. S. M. Mould, F.I.A., gave a lecturette, subject, "The Basis of True Constitution," which was greatly appreciated and which appears on page 81 of this issue.

**The President** spoke as to the necessity of having a reporter to take down lectures such as Mr. Mould had just given. Also regarding a series of visits to works of importance, Canberra, Cordeaux and Avon Dams, and Mitta Mitta reservoir at Albury.

The meeting closed at 10.30 p.m.

## THE FEDERAL COUNCIL OF THE AUSTRALIAN INSTITUTES OF ARCHITECTS 1923 MEETING

Held at the Rooms of the Institute of Architects of N.S.W.

(Continued from April Issue.)

**Mr. Sydney Jones:** I think there is not a very serious difference between the different codes. The percentages charged in nearly every case are just the same, only in the N.S.W. charges there is a number of preliminary clauses, directions and explanations to clients. The N.S.W. Institute, on the advice of its solicitors, has re-worded the majority of the clauses, and my own private opinion is that they are not quite so clear to ordinary people as they would be if figures were used instead of words. The main point I want to make is, there is really not so much difference so far as figures are concerned, and if the members of the Council will undertake to compare the two, they will then be able to more forcibly put the case for each State before the Council. I think it most necessary that a comparison should be made and that some finality should be come to on this matter. Mr. Kenwood and I represent W.A. We are not in agreement on the Federal charges, and we want to report how the Federal Council feels in regard to it. We are also going to suggest that a clause in the W.A. charges should be incorporated in the Federal charges. The main point is that we should be certain of coming to finality in this matter. Many men have come to me and said: "What is the charge for this, and what is the charge for that?"

and I look up the Federal charges and I find that they are somewhat different to the N.S.W. charges.

**Mr. Hudson:** There is no doubt that every State must act in the same way and adopt the same code.

**Mr. Sydney Jones:** I think if Mr. Henderson's suggestion were adopted and we compared the two codes we would find that there is very little variation except in the matter of verbiage. In many respects the N.S.W. code is very clear and good, especially the explanatory portions. I am prepared, on behalf of West Australia, to support Mr. Henderson's proposal.

**Mr. Kenwood:** I think this is a very important matter. West Australia disagrees with the 10 per cent. charge; they point out that by insisting upon a charge of that kind the smaller Architects or young men would be victimised to a large extent, because hardly anyone would be prepared to pay 10 per cent., whereas they could easily get their 6 per cent. I think that there is something in the contention. However, those are questions which might be brought up later with advantage.

**President:** This is a matter of very great importance, and the larger importance is to make one's Institute and one's members appreciate that the alterations are for their own good. If one can do that one can succeed, and that was our hope with regard to this scale.

**Mr. Henderson:** I am going to move in a moment that consideration of this matter be deferred until



Monday's meeting, but before that I would like to make a few remarks which will probably give members food for thought. There is an alternative scheme which I may put forward on Monday. I personally would not remain a member of the Federal Council unless I thought that the object of the Federal Council was to, as far as possible in the main matters of Architectural practice, make for uniformity of practice throughout Australia, with the object ultimately of the coming together of our Australian Institutes to form the Royal Australian Institute of Architects. I regard the function of this Council as being to gradually unify the main principles of practice in the various States. Australia is a big Continent, and it is very difficult for the Federal Council to keep in touch with all the States in regard to all minor matters, and the thing which occurs to me is whether it would not be possible with regard to the scale of professional charges, where Architects practise in different States (possibly in some States he does more for his clients than in others, and in some States the complexities of building are greater than in others—for instance, in N.S.W. with all your rugged sites), for the Federal Council to lay down a broad skeleton scale of charges which shall be possibly the minimum charges and to which States may make additions and alterations in the verbiage and add clauses which they may think necessary for the protection of their members in their own particular State, but the Federal scale would simply be a skeleton scale of the principle on which charges are to be made. If we cannot come to any agreement on Monday in regard to the question of scrapping our present Federal scale and substituting the N.S.W. scale, or if we vote down the N.S.W. scale on Monday, I want members to think over the other possibility of possibly even cutting a bit out of our present Federal scale and passing a resolution that States may make such conditions without interfering with the principle under which we charge or the minimum we charge on the Federal scale, and they may make additions or alterations to the scale, without reducing the scale, to suit the particular practice in their State.

**Mr. Rutt:** I might point out that is already provided for.

**Mr. Henderson:** But the request of N.S.W. is that we shall *holus bolus* adopt theirs. The obvious objection comes from W.A. with regard to the 10 per cent. for smaller works, and it is a very well-founded objection, in my opinion. Possibly in N.S.W. there is a very good reason for that item for small works, but in some States possibly small works are simpler than in other States; possibly in some States the Architects give a fuller or more detailed service.

**Mr. Laybourne-Smith:** It is a question of diplomacy.

**Mr. Henderson:** You must have more scope; I think there must be some elasticity in the smaller matters in which the domestic Architects of a State should have a say. I would like members to think over what I have said, and I would now move:

That details of consideration of the Federal scale and the State of N.S.W. scale which we are asked to adopt be deferred until Monday's meeting.

**Mr. Kenwood:** I second it.

Motion carried.

#### National War Memorials.

**President:** I shall be pleased to hear what the various States are doing. You will remember at our last meeting, when this question came up, there were reports from Victoria, South Australia, Queensland and N.S.W. as to what was being done, and it was then resolved to ask members to amplify their reports, forward same to the Secretary, and Mr. Sydney Jones be asked to draw up a report from that.

**Mr. Sydney Jones:** I have not had full particulars from W.A. or Queensland, but I could prepare my report on what I have received from the other States.

**President:** Have you had a formal report from any State?

**Mr. Sydney Jones:** Yes; Victoria, South Australia and Tasmania have sent theirs, and N.S.W. has its report here. But I have nothing from the other two States, and I thought I had better not send in a report until I had replies from them. I was asked to draw up a report upon what had been done concerning War Memorials, but I have not got the particulars and cannot do it. But if the Council wishes me to prepare the report without the information obtainable from W.A. and Queensland, I will do it at once.

**Mr. Laybourne-Smith:** You have got something from Queensland, have you not?

**President:** No; Queensland does not reply. Queensland, of course, did report at the last annual meeting.

**Mr. Henderson:** Is it your desire to take reports from delegates now?

**President:** I think so.

**Mr. Henderson:** We are, I think, most advanced in regard to the project. In Victoria a public meeting was called, and a largely attended meeting was held in our Town Hall, with the object of considering the erection of a State War Memorial. Many leading citizens were present and a committee of influential men was formed. From that committee a sub-committee was formed to deal with the question of competitions and designs. To that sub-committee we offered our services

immediately, to assist them in framing conditions of competition. A sites committee was chosen from that committee, and a suitable site chosen in the neighbourhood of our city. Then began the question of preparing conditions for competition, and we had an eight-months battle with the committee, and in connection with that battle I want to refer to the services the Federal Council rendered to us. The crux of the whole question was the adjudication, and after many interviews it was finally decided and accepted that the adjudication was to be by two members of an Adjudication Board of three—two members nominated by the Federal Council of Australian Institutes of Architects and one member nominated by the State War Memorial Committee, the nomination of the two members of the Federal Council to be approved by the War Memorial Council, and the nomination of the War Memorial Council member to be approved by the Federal Council. Things at one stage came to an absolute *impasse*, because we Victorian Architects insisted that the decision of the assessors should be final and binding on all competitors, and also insisted if the competition were won by a man eminently skilled in design but not a practical man in carrying out the work, the assessors should have the duty of nominating the competitor who was to be associated with him, so as to give the combination of practical strength, and we insisted that the assessors should have the duty of assessing the allocation of fees between them. It got to a stage where I, as the President of the Victorian Institute, had practically to tell the Minister for Public Works that if these conditions were not acceded to, so far as the practising Architects in Victoria were concerned there would be no competition—it was done as nicely as possible, of course. In the course of the difficult interviews I had with him, I many times referred to the Federal President, Mr. Godsell. Finally, a wish was expressed by the Minister for Public Works to meet Mr. Godsell. Mr. Godsell was of the utmost assistance to us, making a special trip from Sydney, and we had it out on the floor, and Mr. Godsell was a good deal more emphatic than I was in regard to this matter. The end of it was that the State War Memorial Committee have sent conditions of the competition to the Cabinet—because the State Government has contributed £50,000—and opposition to our wishes faded away completely. The Premier took the stand that the goodwill of the Architects was essential to the success of the competition and their views must be adhered to absolutely, and finally we have a set of conditions which, I think, are eminently fair to competitors, because their work will be judged by a committee of experts whose decision cannot be overruled by a lay committee.

Since we have had that principle established with regard to that competition, we have every hope that the same principles will be established with regard to another big competition in respect to the cathedral, which is to be decided on the 30th June next.

**Mr. Hudson:** Has it been decided who the assessors should be?

**President:** Yes; the various Councils were asked to nominate two from each Council, and Mr. Lough has the final voting which he will produce for you. I have to thank you very much, Mr. Henderson, for your very clear statement, and I congratulate Victoria on having done more than I think any other State can at the present moment claim. Unfortunately, N.S.W. cannot claim to have done anything like that which Victoria has done.

**Mr. Henderson:** I think we have already conveyed our thanks to you for the prompt action which you took and which helped us very materially. We had gone to the limits to which we could go without adopting union tactics, and our position was not at all satisfactory, but your coming along just clinched it. We established a principle which in similar competitions since has been approved by the promoters.

**Mr. Hudson:** Throughout the twelve months we have got every competition on the same principle.

**President:** When competitions are properly conducted, and when a good hold is taken of the business in hand and the whole position properly put to the promoters, it is extraordinary how soon they go to the Institute for advice and assistance.

With regard to the adjudication, a letter from our Secretary to Mr. Henderson states that the assessors nominated were Messrs. G. H. Godsell (President of the Federal Council) and K. A. Henderson.

**Mr. Henderson:** I think it might be wise if we sent a letter from the Federal Council to the State War Memorial Committee asking if they would submit to you the name of an assessor to act with our nominees. I understand that they have not appointed anyone, and that there are several people waiting.

**Mr. Waterhouse:** Would it not be advisable to mention at the same time that competitors should be informed of the names of the assessors selected after they have been mutually approved?

**Mr. Laybourne-Smith:** I think that the South Australian Council forwarded to Mr. Sydney Jones a formal report which only elaborates the report made at the last meeting of the Council.

**Mr. Waterhouse:** In Sydney the position is that about £60,000 has been subscribed towards a national memorial, and, unfortunately, that £60,000 is tied up



in the hands of trustees. One of the trustees has unfortunately died, and it appears that before the funds can be used for the very purpose for which they were collected, an Act of Parliament must be passed. Up to the present moment that difficulty still exists, and in the meantime we have been suggesting to the Returned Soldiers and Sailors' League what would be a suitable form for the memorial. A difference of opinion lies in this direction. One section would like a utilitarian memorial whilst the other section would have liked an idealistic memorial. On that point, it appears that the money was specifically collected for the erection of a memorial hall, so that part will have to be expended in that way. We have made a suggestion to the R.S. & S. League which meets with the general approval of the members, we think, to utilise the old Macquarie Barracks, which could very easily be converted into a hall for soldiers, and then we could have, as a part of the Hyde Park improvements after the railway is completed, an idealistic memorial in the park, or perhaps in St. James' Square adjoining. In that way an old building of architectural value would be preserved and bring about the necessary improvement surrounding that building, opening up on the north side an avenue from Macquarie Street to the Domain, which would leave the building isolated, whereas now it is surrounded by non-descript structures, and leave the bulk of the money for the erection of some idealistic monument close to it. A design showing how it could be carried out has been prepared by Mr. Harris, of the Institute, and forwarded to the League, so that they could have before them a design showing what we propose, and a rough estimate of what the cost will be. Then a difficulty arises that a number of the members of the R.S. & S. League are keen on purchasing a hall in the city, which we contend will have a utilitarian value but no idealistic value at all, and it will soon cease to be a national memorial, and could never be regarded as one. We are strenuously opposing that, and hope to get the matter on the right track shortly.

While the Federal Council was sitting, I thought it would be advisable and very helpful indeed if we could have it recorded that the Federal Council sitting in Sydney had inspected the building and site and had inspected the sketch and endorsed or otherwise the proposal. That would help us a good deal if we could hand over to the authorities a recommendation from this Council. I think that in Victoria they found it so, and that the President and the Council were able to help. So here I think that the Council will help us when we come to finalise the matter. On the other hand, we are envious of Melbourne, where so great a sum has been subscribed. Unfortunately, we have not

been able to get any more funds here, and we shall not get any more, unless we decide on an idealistic memorial, because to many people a utilitarian memorial does not signify the sacrifice and valour of our young men who fought in the Great War.

**Mr. Henderson:** In connection with our memorial, which is estimated to cost a quarter of a million, the Victorian Government immediately agreed to give £50,000, and the City Council £50,000 on the express condition that it should be an idealistic form of memorial.

**Mr. Kenwood:** Quite right, too.

**Mr. Henderson:** Until they have something to show the public they are not touching the public for funds at all. They have at present £105,000 out of £250,000 in the bank.

**Mr. Waterhouse:** We shall use what you have done as a means, we hope, of securing something better for ourselves. We have pointed out that if we have £60,000 we could probably only spend £25,000 on the building and the balance of the money would have to be invested to form a fund for the maintenance of the building.

**Mr. Henderson:** The idealistic form is the only one which is safe against changes as time goes on.

**Mr. Waterhouse:** It should be of imperishable material which requires little or no maintenance.

**Mr. Laybourne-Smith:** What has been said makes it clear that we should persevere with the pamphlet. It would show the success in Victoria and what you have done in New South Wales and the lamentable failure of South Australia. That pamphlet, with an article dealing with the whole of the schemes—a sort of preface or addendum pointing out what has been done—would be useful in every State. We could use it very well in South Australia.

**President:** We could use it very well here, because if it were printed in pamphlet form and distributed it would show our politicians, aldermen and others how we have dropped behind, whereas Victoria has gone ahead and done the right thing.

**Mr. Hudson:** I have pleasure in moving: "That in the opinion of this Federal Council of Australian Institutes of Architects, it is desirable that the National War Memorial of New South Wales should be of a non-utilitarian and idealistic character."

**Mr. Henderson:** Supposing you say "All State Memorials"?

**Mr. Waterhouse:** "That State Memorials should preferably be of a non-utilitarian character," particularly in regard to the position we are now in of endeavouring to steer a middle course. Funds have been collected for that hall and we must spend portion

of the money on it, but there is nothing to prevent us spending some for an idealistic portion of a memorial and then gathering other funds from the public to complete that.

**Mr. Henderson:** Your Government must put up £75,000.

**Mr. Waterhouse:** To finalise the remarks which I made with regard to our own memorial, I do hope before this Conference concludes that members will visit the site and have explained to them what we are proposing. Then they will be able to endorse or otherwise the proposals made. I think that will help us a great deal, particularly if we do ease the pressure on the lines indicated.

**Mr. Henderson:** I move as an amendment to Mr. Hudson's motion, "That the Committee, having the question of War Memorials in hand, be urged to produce the evidence and report," which will indicate that all memorials be of a non-utilitarian character.

**President:** Could not the resolution be worded: "That, in the opinion of this Conference, it is desirable that State War Memorials should be of a non-utilitarian character, and that the Committee having the question of memorials in hand be urged to adopt this principle."

**Mr. Henderson:** I would make two separate motions of it.

**President:** Very well. Then Mr. Hudson's motion will be:

"In the opinion of this Conference, State War Memorials should be of a non-utilitarian character."

**Mr. Laybourne-Smith:** I second that. I hope we shall be able to use the pamphlet as a means of educating the people in the respective States. The pamphlet has been waited for for three or four years; someone was deputed to do it before Mr. Sydney Jones. It is only because the States have not produced the necessary evidence that Mr. Jones has not produced it.

**President:** We can take the evidence that we have and ask Mr. Jones to prepare it with an article.

**Mr. Laybourne-Smith:** That is my idea. I would move:

"That Mr. George Sydney Jones proceed with his report upon the evidence he now has in hand, to complete it with an article upon the subject, and to submit the same to the delegates of the various States, after which it is to be printed at the expense of the Council."

**Mr. Waterhouse:** Do you propose to empower us to publish the pamphlet, or wait?

**President:** I should ask for authority to publish it.

**Mr. Sydney Jones:** I would like it approved by all the States.

**Mr. Henderson:** Typed copies could be sent to the delegates and they could O.K. them.

**Mr. Waterhouse:** Should each State be asked to contribute toward the expense of the brochure? It is an opportunity of making the brochure of very great educational value on the subject of memorials. I was thinking whether we could make it of greater importance by illustrating it. If it were amplified by one or two articles and illustrations, it would probably be of more value; it is a thing which ought to be placed in the hands of people in every State.

**Mr. Sydney Jones:** Am I to take it that I have instructions to go ahead?

**President:** If you please. I will put the resolution moved by Mr. Laybourne-Smith.

Motion carried.

**President:** The next business is with regard to the bronze medals competitions. I have to announce that for 1921 the winner was Mr. J. D. Scarborough, and the runner-up Mr. W. H. Eales. Three theses were submitted. The medal had not been presented.

**Mr. Laybourne-Smith:** Will you permit me to mention that at the last meeting but one of the Council the Institute of Victoria very kindly offered to lend us their die containing a laurel leaf and a place for inscription on one side of our medal, and thus save us a great amount of expense, if we could prepare the other side. We ultimately got the other side completed and we are very much indebted to the Victorian Institute because theirs is a beautiful die produced at very great expense.

**President:** The next business is to approve of the design and strike the medal.

**Mr. Laybourne-Smith:** I think it is rather too late to approve the design.

**Mr. Hudson:** I think the medal has been struck.

**President:** Then I will ask the President of the Victorian Institute to present the medal.

**Mr. Henderson:** The presentation will probably synchronise with one of your visits to Victoria and you may be able to present the medal yourself.

**President:** The winner is a Victorian, and I thought that you might like to present the medal.

**Mr. Henderson:** The matter to be arranged between the President of the Victorian Institute and yourself.

**Mr. Jones:** The next matter is for the Federal Council to approve of the subject chosen for the 1923 competition.

**Mr. Laybourne-Smith:** I take it that it has been taken for granted that the Council would approve. At the same time, I would like the date extended from the 31st March. Students have only just finished their holidays and will only have just commenced work, and



will not be able to produce decent thesis until towards the end of the year, so I would like the date to be extended. I think that we should get the thesis in before the date of the annual examinations, which is in November, so I think a good closing date would be the end of October.

**Mr. Sydney Jones:** Is there any chance of a larger number of competitors if that were done? There were only three last time.

**Mr. Henderson:** We get a number of younger men at our monthly meetings, and I will undertake that the competition will be announced for at least three months, and we will also send a notice to the University and have it posted on the notice board.

**Mr. Sydney Jones:** I think I should be quite in order in recommending the approval of the extension of time.

Moved by **Mr. Laybourne-Smith**, and seconded by **Mr. G. Sydney Jones:**

"That the closing date for the 1923 Bronze Medal Competition be extended to the 31st October, 1923."

Carried.

**Mr. Rutt** moved and **Mr. Kenwood** seconded:

"That the thanks of the Council be conveyed to the assessors of the last competition."

Carried.

**Mr. Waterhouse:** As a record of the work of these theses, would it not be desirable if we could afford to have it printed, and it will probably become very valuable later on as a record. Every State Institute Library would have a copy, and at some time or other the Federal Council may have decent quarters and would like to have a record of these things.

**Mr. Laybourne-Smith:** I think if it has been published in the recognised journal that is all that would be necessary; I do not think we would be justified in re-printing it.

**Mr. Henderson:** Could we have it noted in our Minutes that it is published in such and such a journal on such a date? That would achieve the same object.

#### **The Levy for 1922.**

**President:** On the subject of fees, I want to explain the reason N.S.W. only subscribed 2/6 last year. It was because we added this levy to our annual subscription, and that was levied upon members of the Institute before notice was given of the increase to 3/6. This year we will put it right.

**Mr. Henderson:** There is a little to come from New South Wales?

**President:** Now I want to come to something much bigger than that.

**Mr. Henderson:** Up to date, 2/6 a head has been collected from each State?

**President:** Yes; but we will have to talk over what is to be done in the future. But the matter appears later in our business sheet, and we will deal with it then.

#### **New Business.**

##### **Affiliation with R.I.B.A.**

**President:** I will ask the Assistant Secretary to read the letter received from the Royal Institute on the subject.

(The Assistant Secretary read a letter from the R.I.B.A., dated 15th December, 1922, stating that the Federal Council of the Australian Institutes of Architects had been admitted into alliance with the Royal Institute of British Architects on December 4th, 1922.)

**President:** I am sure you will be pleased to know that the alliance is completed; it is a step in the right direction because we are throughout the Empire bound to the Homeland with one chain. There is no doubt it gives the Institute at Home a far greater interest in the work of the Dominions, and gives us a closer touch and a better standing by reason of being allied with the Royal Institute.

##### **Power to recover fees in N.S.W. from a client resident in Victoria.**

The Assistant Secretary read a letter dated 7th January, 1922, from Mr. Allan McDonald, Architect, of Temora; also report of the District Court decision.

**President:** The question is whether advice should be taken, or whether it is of sufficient interest or otherwise; there is a verdict for the plaintiff and he cannot recover because the Court has no jurisdiction.

**Mr. Laybourne-Smith:** It seems to me if it were worth while, and the matter were big enough, it be referred to a higher Court, it would have inter-State jurisdiction.

**President:** Yes; it is merely brought before this Council for information.

**Mr. Laybourne-Smith:** I move that the matter be noted and that the particulars be not entered on the Minutes. We could then hunt the matter up through the N.S.W. Council's own Minutes, but we don't want particulars of this published.

**Mr. Henderson:** I second that.

Carried.

##### **British Empire Exhibition, 1924.**

**President:** I reported this morning with regard to the British Empire Exhibition; it is a dead letter, unfortunately, as far as we are concerned. We did all we could here; we tried to bring about a competition so that we might say the building had been erected by an Australian Architect, and arranged to send a gentleman to look after it; but that is another matter which should be mentioned when the deputation waits upon Mr. Bruce.

**Mr. Henderson:** I would just like to repeat the promise made; it was made at the Master Builders' dinner. Mr. Rogers came to me and said: "Henderson, Cabinet have just decided that they are going to have an All-Australian Competition amongst Australian Architects for designing the building for the British Empire Exhibition, to be conducted by the Federal Council. Do you think it should be announced here?" I thought the sooner it was announced the better, and I said, "Certainly; I am sure the builders will appreciate it for the Architects present," and he got up and announced it. Next day I wrote to you, Mr. President, and I thought it was a distinct score for the Architects of Australia and the Federal Council. Then we were told it was too soon to consider it, and six weeks later it was too late. Then we were to have a consultation before the public officers went home. I got a pledge from one of the commercial members to that effect; then all that went for nothing.

**Mr. Kenwood:** We had the same experience with the War Service Homes.

**Mr. Waterhouse:** In connection with the British Empire Exhibition, judging from the reports in the Press of the last week, the committee has been formed to deal with the Home Section of this Exhibition; the Secretary, I believe, is Mr. George Taylor, and, so far as I am aware, one Architect from the Government Architect's Branch here is connected with it. We as an Institute, in view of what the President has told you, felt we could hardly take the matter further. But this Council could enter a protest against the work being carried out without some other Architectural representative on the committee. The idea is to secure a typical Australian house; have it erected, full size, at the Empire Exhibition, but first of all the difficulty is to decide what is the typical Australian house. If it is left in the hands of those now dealing with it, it will not even approach the typical, so we will have something there which will be a positive disgrace to Australia. We could possibly enter a protest that the work should not be undertaken without some further Architectural representation, even if it went so far as having one from each State it would be better than allowing it to drift as it is—it will mean that some travesty on a Californian bungalow will be erected and sent home and reflect very greatly against the work of Australian Architects.

**Mr. Henderson:** How would you like a treble-barrelled motion like this:—

1. That this Federal Council strongly protests against the action of the ex-Minister for Trade and Customs in not honouring his public promise to have an All-Australian Competition

for the design of the Australian Court at the British Empire Exhibition.

2. That this Federal Council strongly protests against the non-honouring of the promise of Mr. Sterling Taylor, the Secretary to the Australian Section of the British Empire Exhibition, to consult members of the Federal Council prior to despatching a Commonwealth officer to London; and
3. That this Federal Council views with consternation the suggestion that the Home Section Committee should be empowered to select a "typical Australian home" without consultation with the practising Architects. That in view of the importance of the matter, the Federal Council would be agreeable to select a suitable design for erection at the Exhibition.

**Mr. Laybourne-Smith:** I will second the motion. Carried.

**President:** A copy of the resolution to be sent to Mr. Farrar, the Minister for Labour and Industry in N.S.W., and a copy to be sent to the Minister for Trade and Customs in Melbourne to show the action of his predecessor.

**Second Day: Saturday, 10th February, 1923, at 10 a.m.**

(The Delegates for West Australia were not present; all others were in attendance.)

#### Registration.

**President:** In the first instance, I should like to congratulate Victoria on having obtained registration. I feel sure they will find it of very great advantage in the years to come, and I am also certain that they will never know until they get the lists of architects applying to be registered how many architects or people who wish to call themselves architects would like to have their names on the Register. We have about 600 applicants for registration in New South Wales.

**Mr. Laybourne-Smith:** In view of that, are you sorry you have got the Bill through?

**President:** The position I wish you to seriously consider with regard to registration and which I wish to urge upon you is this. In New South Wales we are fortunate in having a Chair of Architecture established at the University. We have also for the poorer classes who cannot afford the fees of the University, the Technical College, where they can get their education very cheaply and they have to be very earnest to obtain that education because it means that they have to work at night after their day's work is done to obtain the knowledge they require to practise their profession. At the same time, we have very earnest men at the Technical College who have taken a deep interest



in seeing that boys are properly educated. The consequence is that we have arranged for the same standard of education both at the Technical College and at the University. If a boy after spending two years at the Technical College likes to put a year in at the University, and can pass the examination which is equivalent to the A.R.I.B.A. final, he can then obtain his degree in the University so long as he has matriculated in the first instance. The first test is Matriculation, or the equivalent Leaving Certificate. The next thing he has to do is to get his diploma from the Technical College or a diploma from the University if he does not matriculate. But if he matriculates he can obtain his degree should he pass the necessary standard of efficiency.

Having regard to that position, I was able to arrange with the Registration Board, that from the present date every man who is not elected or registered, or is turned down, before he can practice as an architect in N.S.W. will have to pass an examination equivalent to the final of the A.R.I.B.A. That is the only future means of admission to the profession in N.S. Wales, and that is the only means of admission through the other doors also—namely, the Technical College or the University.

Now, what I am anxious to do, and I would like it to be done before I step from this chair, is to arrange throughout the Commonwealth as to registration. In Western Australia registration exists; in Victoria registration has come about. I would like to see South Australia take steps to obtain it, and I hope to see the Commonwealth united in one thing that will link up this union of the Institutes throughout the Empire, so as to make one standard for the future—the final of the R.I.B.A. That means one linking up all over the Empire of qualified men for the future. We shall not obtain the benefit, but we shall do a great thing for the future of the profession in the Empire, and that is what I want you to seriously consider. It has been on my mind and it is a matter in which I am keenly interested, and I wish to retain my position on the Board until we have settled matters so that there may be no alteration, and I may be able to see my way, with the assistance of the States, to make the future entry into the profession the final of the R.I.B.A.

**Mr. Rutt:** Is Matriculation a step towards the Technical College course?

**President:** No; Matriculation is not the first step towards the Technical College course. The Leaving Certificate is the first step. Without Matriculation you can only obtain the diploma at the University and not the degree.

**Mr. Waterhouse:** If the boy does two good years at the Technical College and goes to the University

and goes through the whole course, unless he had previously matriculated he could not get the degree of Bachelor of Architecture.

**Mr. Henderson:** We settled that years ago in our Articles of Association.

**President:** You did but unfortunately we had, in connection with the Technical College, a sympathetic Government towards those who could not pay fees and who were learning what I might term “little stuff”—obtaining enough knowledge at the Technical College to be dangerous. That, we have striven very hard to overcome. We did overcome it because we had two fine men there who, although in the first instance they thought we were trespassing on their preserves, afterwards knew that we were only trying to assist them for the future in organising a standard throughout the States.

**Mr. Waterhouse:** They raised their standard.

**Mr. Rutt:** Then in future will the Technical College give a diploma.

**President:** Yes. You can obtain the Architectural diploma of the Technical College and practise, if you become registered, but the standard of examination of the Registration Board is the final of the R.I.B.A.

**Mr. Waterhouse:** I think Mr. Rutt's point is that, if they held the diploma of the Technical College, would they automatically become registered?

**President:** Yes.

**Mr. Rutt:** Then your Registration Board now has no control of the standard.

**Mr. Waterhouse:** Yes, we have to this extent, that we have specifically stated in the Bill that a man must hold the prescribed diploma of the Technical College, or degree of the University of Sydney, or some equally accredited University or School of Architecture.

**Mr. Rutt:** And it is optional whether after two years at the Technical College they go on with their Diploma Course or take the degree at the University, but in either case the standard is the same.

**Mr. Waterhouse:** Yes, absolutely.

**Mr. Hudson:** But does the boy who gets his diploma at the Technical College, have to pass an examination equivalent to the Leaving Certificate or Matriculation?

**President:** Yes, he cannot take his diploma course until he has attained it.

**Mr. Hudson:** Is your Leaving Certificate Examination equivalent to Matriculation?

**Mr. Waterhouse:** They are the same standard. If they get the prescribed Leaving Certificate pass it is equivalent to Matriculation.

**Mr. Laybourne-Smith:** Are languages included in the Leaving Certificate pass?

**Mr. Waterhouse:** Yes.

**Mr. Hudson:** I think that is a very fine standard, because it gives the boy who cannot afford a University education the chance of taking his course, and he has to be on the same standard as the other boy.

**Mr. Waterhouse:** We have a boy with us, a brilliant youngster, whose people cannot afford to send him to the University. He can come into the office and supplement his office work by taking the diploma course at the Technical College. If he is fortunate enough to do well there, he goes on to the University and becomes Bachelor of Architecture. He gets a bursary from the Technical College to the University. I take it, however, that no office in Sydney will accept a pupil unless he has a matriculation pass.

**President:** We went one better even than that. Supposing a boy's parents cannot afford his fees at the University and he spends two years at the Technical College and can pass his finals and spend one year at the University, he can do that and obtain his degree. Although a boy may be without means, he would sooner have a degree than a diploma.

**Mr. Laybourne-Smith:** All this is of course quite well understood, but I think the one thing that we do not appreciate is that when we get registration the prestige of our Institute will go out of existence.

**President:** No.

**Mr. Laybourne-Smith:** Well, it absolutely is the case in the other professions and it must be the case here. The Registration Board will quickly usurp any kudos which at present attaches to the Institute of Architects. That is the one great case against registration, and what prevents registration being carried in England. It is a thing we should look at very seriously here. I know that it already has had that effect, because I had a man from Western Australia who called on me, and the airs and graces he put on because he happened to be a member of the Architects' Board were such that I had to tell him we could have had registration any time in the last 15 years in South Australia, but we thought we would be lunatics to accept such a thing. After that he modified his attitude somewhat. But his attitude was such that he did not care for the Institute or anything else. You will be able to register as an architect in N.S.W. whether you are a member of the Institute or not, and those are not members of the Institute but who are registered will very quickly outnumber the Institute members. It is the same with dentistry. The Odontological Societies have lost their prestige since the Dental Board has come in. For years in South Australia we have had an auctioneer appointed by the Government to be

Chairman of the Dental Board; two appointed by the dental profession, and two outside members, men not members of the Odontological Society.

**President:** I am very sorry to hear your views. So far as the Board to-day exists here the one idea of the Board is that we are merely, as a Board, the tribunal for seeing that only proper persons are registered, and we look for assistance to the Institute of Architects to advise us and to keep in touch with us with regard to their members, the Institute of Architects being the educational body. The Registration Board is not an educational body. It may conduct examinations and will conduct examinations if necessary, or may ask for the examination to be conducted by the Chair of Architecture at the University; it may do anything in that way, but it is merely a registering body to see that a man practises his profession legitimately and in a proper manner, and to receive reports from the Institute or anyone who desires to report any person for unprofessional conduct. But it is not going to usurp the position of the Institute, and without the Institute the Board would feel it was not complete. The Institute will always be first. The Registration Board will always be the Board which will rely on the Institute very largely for information as to practise.

**Mr. Rutt:** At present that may be so, but how is your Board constituted.

**President:** Our Board is constituted in a manner to-day that will enable the Institute, if the Institute maintains its numbers, to always dictate as to who shall be the new member of the Board, because we have to get a ballot of the architects of the State for a new member.

**Mr. Laybourne-Smith:** Of the registered architects.

**President:** Yes, and our Institute comprises a majority. So long as we maintain our standard of numbers and of efficiency within the Institute, we shall always command the majority.

**Mr. Rutt:** That is all right, but what at present is the number of your Institute.

**President:** 300.

**Mr. Rutt:** And you have 600 applicants for registration.

**President:** That is another matter altogether. Then there is an Architectural Association here in which there are 60 members. We can always rely upon that Association. As a matter of fact, the Association wants to join the Institute if we can alter the constitution to bring them in. They are very anxious to join with us and make one big body, because they can see we shall always hold the majority.

**Mr. Waterhouse:** Is there not another point which will result in the Institute always holding the ascend-



any, and that is, although you have a Registration Board, the Institute is actually the organ which will carry on all the professional functions; it will be the rendezvous we hope of all the architects, and it is for the Institute to make it more attractive. It will be rather a reflection on the Institute if we cannot maintain our position as the educational body of the profession. I do not think that we need fear anything from the Board at all, nor do I think that the public will accept the fact of there being registered architects as against there being a Fellow or an Associate of the Institute. The Registration Board absolutely ceases at the moment of registration or examination, but the Institute is going on all the time, and the lectures and propaganda work in the interests of the profession will always keep the Institute before the public. The Registration Board will drift to the background after the registration is done with.

**Mr. Rutt:** How is the Board constituted?

**President:** The members of the first Board shall be the head of the Faculty of Architecture in the University of Sydney, the President of the Institute of Architects of N.S.W., the President of the Architects Association of N.S.W., the Lecturer in Charge of the Department of Architecture at the Sydney Technical College, and four other persons appointed by the Governor. The members of the first Board shall hold office for three years, and thereafter the Board shall consist of 8 members, but two of such members shall be appointed by the Governor; two of such members shall be architects in practice, who shall be elected in the manner prescribed; the Head of the Faculty of Architecture in the University of Sydney; the President of the Institute of Architects of N.S.W., the President of the Architects' Association of N.S.W., and the Lecturer in Charge of the Department of Architecture at the Sydney Technical College shall be ex officio the other four members. One of the members shall be elected by the members as President of the Board.

**Mr. Laybourne-Smith:** You are very fortunate in getting a Board with that constitution; it is very much better than we are likely to have in many other States, and is very much better than they have in many other professions. You have four men that you can rely on out of eight. You said that my remarks were damaging to the course.

**President:** I did so with the greatest courtesy, but it is damaging to us because three of the members of our Institute resigned and said that they had no use for the Institute, just in the way you have expressed it.

**Mr. Laybourne-Smith:** I am only expressing what has been said to me by many architects.

**President:** A letter was drafted and sent to these men and one has re-considered the position and says he is perfectly satisfied and he has withdrawn his resignation. The other two I suppose have resigned. But I would like to assist the States in this way, in that I would like the feeling, as a result of this Conference, to be that registration is going to be a power amongst us and of great assistance to us and to every Institute in every State.

**Mr. Rutt:** I think we are all agreed with the principle of registration providing proper safeguards can be given. In South Australia we were of that mind but we were very doubtful what contingencies might arise which would altogether throw over the domination of the Institute.

**President:** Can you not draft your own Bill and put it before Parliament and get it put through?

**Mr. Rutt:** We did that 30 years ago, but when it got to the House it was mutilated so terribly that we would not have it.

**Mr. Waterhouse:** That occurred here. The Minister in charge, Mr. Mutch, felt after it had passed through the Council that it had come back in such a mutilated state that he wondered whether it would be of any use to us at all, but we said "We will have it in that mutilated state because we can always afterwards get an amendment through which will embody the clauses we want. We now have a peg on which to hang our hats, we had nothing before."

**Mr. Masters:** That is one advantage of this Federal Council—where one State is in doubt, the experience of the other States can be given.

**Mr. Laybourne-Smith:** We have always felt, if we could get a similar constitution to the New Zealand one by which the Institute of Architects automatically became the Board with its various faculties, the thing would be acceptable. I know very well that twenty-five per cent. of the Institute of Architects are members for business protection purposes. This good fellowship we talk about, and this scholastic fellowship is all very well, but very many members join the Institute for the trade protection part of it, and when they get that protection under the Board they refuse to pay 3d. per year to the Institute of Architects. I think you will find that having got your Bill through, your membership will go down in spite of your optimism.

**President:** We have got our Bill and our subscriptions have come in more readily this year than ever before; in fact, they are nearly all paid up.

**Mr. Laybourne-Smith:** I cannot help feeling that must be the result, having got the necessary statutory protection they will not worry the Institute of Architects.

**Mr. Henderson:** So far as Victoria is concerned, we are in the same position as Western Australia and New Zealand in regard to registration, in that those architects registered by the Registration Board have to call themselves "registered architects." I am assured by the Minister for Public Works and the Secretary, Public Works Department, that that position as far as Victoria is concerned, is a temporary one, and we felt that in getting the Bill passed, even if we had to call ourselves registered architects for the time being, half a loaf was better than no bread. For many years we have tried in Victoria to get a Chair of Architecture at the University. We have a diploma course in Architecture, and we believe that the Chair of Architecture will shortly follow. When we get that Chair established at the University and get a definite course of training for all future architects, just as for the medical and legal professions, at the University, we will get an amendment of our Registration Act by which only qualified architects will be able to use the word "architects." That is, those who now are registered architects will be the architects of the future, and those who are not registered will be recorded by the Registration Board until they die out. We are satisfied with the position for the time being, because we think it is better than nothing. I am a very new member of the Federal Council and I had no idea as to the attitude of South Australia with regard to registration, and frankly it rather appals me. The view I take is that the primary object of the Federal Council is to bring about uniformity and to maintain the status and integrity of the profession. I cannot imagine any way in which the status and integrity of the profession can be better maintained or elevated than by having some definite control over those who are practising, by means of a Registration Board. It does not mean for one moment that because a man becomes an architect under the Registration Board, or a registered architect under the Registration Board, that he is set for life, because that man, for any malpractice of any description, can be reported to the Registration Board, which has got to inquire into the matter, and can deregister him, and it is on the man himself to go to the Court to get re-registration, and the Board has not to go to the Court though the man has to. I cannot imagine anything which will do more to clean up the profession. You say that in N.S.W. you have 600 applications; you may register 500, but I feel perfectly confident that within two years you will de-register 100 of those from the fact that they have not re-registered or have failed to behave themselves. The Board has enormous powers, but the benefits will not be felt for a few years. I do not think that the Institutes will go down; I think

they will become more powerful than ever through the fact that there will be a definite standard for the future for admission of all members to the profession. At present any man can grow up in the profession, and after a few years he has done a certain amount of work; his training may be doubtful, and in many instances he may wangle his way in. In Queensland they even have no standard of examination.

I cannot see anything but enormous strength from the fact that we have registration, and I would ask S.A. to make a definite effort, even if not on N.S.W. lines, to do so on W.A. lines. I think the time is coming, whether by State enactments or municipal enactments, when, as in certain States of America, the registration of an architect will be exceedingly difficult. In Illinois he has to be exceptionally qualified, and if a man wants to do any building over 2,000 dollars, the plans submitted to the municipality must bear the stamp of a registered architect. I think that will come here in a few years if we put our shoulders together and see that the profession "delivers the goods" better to the public. That is my position.

**President:** I may tell you that already we have a committee at work on the Board with regard to amending the Act. As we find some parts of the Act will not work satisfactorily so we are noting them and making arrangements for a committee to clean these up with a recommendation to the Board which in the future will ask for the Bill to be re-drafted and certain clauses placed again before the House, and we have a guarantee that the House will meet us.

**Mr. Henderson:** The strength that we have and you have is that we have certain Government nominees who are a direct link between ourselves and the Cabinet in regard to those matters which do not work too well.

**Mr. Laybourne-Smith:** I think it would be a very great pity if we did not in this Council tell each other what are our real views of the matter. I may tell you that in S.A. we intend to try and get a Registration Bill through next year. You take it from me, your membership will go down, but although I say that, I tell you we are going to try and get our Bill through this session, because it is the last session of our present Parliament, in which we have a Liberal Government.

**President:** Since registration our membership has gone up.

**Mr. Hudson:** I think there is one thing the S.A. delegates overlook with regard to registration, and that is that although architects will get certain privileges by being registered by the Board, they will not be able to enjoy those privileges to the full without the association with their fellow architects through the medium of the various State Institutes. I feel that the fact of an architect being registered will not give him the full



benefits that will accrue from being registered; he must do that through the State Institute or body of architects in his State. I feel very strongly that instead of weakening our membership it will strengthen us. I really do think Mr. Laybourne-Smith is mistaken about that.

**Mr. Henderson:** Our Institute was never bigger or stronger than at present, and we have never had more applications from young fellows who have passed the diploma course at the University, and we have never had a bigger numerical strength. That is, on the eve of registration and since.

**President:** You may be a registered architect but you cannot get the privileges or benefits from registration that the degree of architecture at the University or as Associate or Fellow or Member of the Institute, which is allied with and part and parcel of the R.I.B.A. can give you.

However, we will congratulate South Australia upon its intention to obtain registration this year and, as I first said, I hope registration will come throughout Australia in the proper form.

**Mr. Masters:** Tasmania has the same intentions. The Bill has been before the House for the last two years, but the late Parliament was not sympathetic. The Bill is to be re-drafted next month, and I have been asked to get what information I can.

**Mr. Hudson:** I would make the suggestion that the various State Institutes might be very helpful to the S.A. and Tasmanian bodies. You were saying you had a committee to find out the weak points of the Act; if those weak points were communicated to S.A. and Tasmania, it would probably be very helpful to them in drafting their Bills, and I submit any State which has an Act should send on any notes that they may have to S.A. and Tasmania. In that way registration would be very helpful to all of us.

**Mr. Laybourne-Smith:** Any suggestions like that coming from the Board would be of value; at the present moment we are so new that we do not know exactly what we want ourselves.

**Mr. Henderson:** We are not appointed yet; we are at present trying to get a Board which will be entirely satisfactory. We have made a definite suggestion to the Government that one of the three Government nominees on our Board shall be a practising solicitor with a knowledge of architectural work, and contracts, and we have nominated a member of the firm who act for our Institute, a well-known man in Melbourne. Our Board members are paid one guinea per sitting.

**President:** The next matter to be dealt with is the ANNUAL LEVY. I want to bring before you the position.

As far as we in N.S.W. are concerned, this year our annual levy has gone out at 3/6 because it went on the 1st January with our subscriptions, and is made part of the total amount due. But I think that for the future we should raise the subscription, and I think that for this year to meet the needs that I know will be bigger needs than usual, if every Institute subscribes ten guineas or something like that from its funds in addition to the 3/6 levy, it would meet the case.

**Mr. Hudson:** Do you think that the Institutes with smaller membership than the Institutes of Victoria and New South Wales should pay the same amount?

**President:** I would be willing that the States of New South Wales and Victoria should give more, in proportion to their membership.

**Mr. Henderson:** I think that the best way would be to suggest that in addition to the 3/6 levy the Council wants so much and that each Institute should contribute its quota on the basis of its membership.

**President:** What is your subscription for a Fellow?

**Mr. Henderson:** £4/4/- less 10/6 if paid before the 31st March. Previously it was less, £1/1/-. We have cut out half the rebate, and we will have an additional revenue this year of about £70. I would suggest that the Federal Council say "We want the levy of 3/6 per head and also £50 to be contributed by the different Institutes according to their membership." I suggest that in the future the Assistant Secretary make an estimate of the amount required for the ensuing year and then strike a lump sum levy. Supposing we finished this year with a big surplus, we need not ask for the same amount next year, but this year we may want money for propaganda work in connection with the brochure on War Memorials, and other matters.

**Mr. Masters:** Before leaving the matter of the levy, I was asked to raise the question of the expenses of delegates from other States. It was thought in Tasmania that it might be done by increasing the levy generally, and making, say, a straight-out levy of 5/- instead of 3/6.

**President:** It could be done next year, but the difficulty I see as far as New South Wales is concerned is that we have sent out asking for the 3/6 on our subscription papers, so as to collect it all at one time, otherwise it would be most difficult to collect our odd 3/6 from members all over the State.

**Mr. Rutt:** We raised our subscription to cover the levy.

**Mr. Waterhouse:** I think Mr. Masters' point was that the expenses of delegates might be defrayed from the Council funds if the levy was increased.

**Mr. Masters:** I think that the idea now is to settle the office in Sydney, but originally it was proposed to alternate the annual meetings in the different States. That being so, it is thought in Tasmania the Federal Council might increase the levy so as to cover the cost of sending delegates.

**Mr. Laybourne-Smith:** The matter is on our Minutes to be dealt with; there is a recommendation from our Institute as to the best method of defraying the expenses of delegates.

**Mr. Rutt:** It might be as well to consider that before we come to the levy.

**Mr. Henderson:** I think the remuneration of the Secretary and the expenses of delegates and the amount of levy should all come together.

**President:** I quite agree that they should all be dealt with together.

Mr. Henderson moved and Mr. Laybourne-Smith seconded:

That the levy for the coming year be 3/6 per member, and that the Assistant Secretary's salary for the past year be £25.

Carried.

**President:** With regard to travelling expenses, would you like to give that matter some consideration before coming to a decision?

**Mr. Henderson:** So far as Victoria is concerned with regard to the travelling expenses of delegates I think we discussed this at a Council meeting about ten months ago, and my recollection is that Victoria is willing to fall into line with the Federal Council and the other States in any decision they come to on that question.

**President:** What I feel with regard to travelling expenses is that it is not a very big item with Victoria and N.S. Wales; most of the delegates fix it up themselves. But with regard to South Australia, Tasmania and West Australia, it is a different matter altogether.

**Mr. Rutt:** That is why we do not get the W.A. people here. If we were to make it easy for them I think we would get them here.

**President:** Would this suggestion be of any use; seeing that the meetings will be held in N.S. Wales or Victoria, in all probability, and that the expenses of the other delegates have to be paid and that a portion of the expenses ought to be paid by South Australia, West Australia and Tasmania, in order to send their delegates to such highly interesting meetings as meetings of this character, that New South Wales and Victoria should pay between them a proportion of the amount to those other three States when they send their delegates.

**Mr. Henderson:** I think so, because N.S.W. and Victorian delegates benefit through the fact that the

Conference is going to be held in their States, and they do not have to incur expense and can much more easily attend. I think that the major portion of the expenses of delegates from Queensland, South Australia, Tasmania and West Australia should be borne by Victoria and N.S. Wales.

**Mr. Hudson:** I think your suggestion is an excellent one, that the travelling expenses of those delegates should be borne on, say, a per capita or 50-50 basis between N.S. Wales and Victoria.

**President:** I think that the other States should pay a proportion of the expenses. I think if we paid them on a per capita basis it would be fair to everybody. I do not think that Victoria and N.S. Wales should pay the whole of the expenses, because whether the meeting were held in Victoria or N.S. Wales there would be some expenses in sending delegates from one of those States to the other. I should have said that N.S.W. and Victoria should between them pay half the total cost of expenses to the other four States.

**Mr. Rutt:** Do you mean travelling and living expenses?

**President:** No, we always reckon it is travelling expenses.

**Mr. Waterhouse:** I think that is a good suggestion and an equitable one, too.

**President:** The other four States should have an interest in sending their delegates. They gain by it, and they should pay their proportionate share, but as they come double the distance and receive no recompense by having the meetings held in their States, they should be covered by half the amount of the travelling expense of the four States being paid by N.S.W. and Victoria.

**Mr. Hudson:** Does that mean that delegates travelling from Sydney to Melbourne to represent N.S.W., or *vice versa*, from Melbourne to Sydney, do not receive any expenses at all?

**President:** That is what it means.

**Mr. Hudson:** I do not think that is quite right.

**Mr. Rutt:** I think the people we have to consider most are West Australians. I think it is on the difficulty of finance largely that we have never yet, except at the second Conference, had a delegate direct from Western Australia.

**Mr. Masters:** It is not only a matter of travelling expenses with W.A. but of time, too. Distant men are penalised to that extent.

**President:** But we all have to sacrifice ourselves for our profession.

**Mr. Rutt:** Do you not think whatever basis you settle on, and whatever proportion of the expense you pay, you should take the total travelling expenses or the proportion of them you decide to pay to all



delegates other than those of the State in which the meeting is to be held.

**President:** Very well, it only means robbing Peter to pay Paul.

**Mr. Hudson:** As a general rule, delegates from Victoria to N.S.W. will not want any expenses, but there may be a case where a brilliant young man cannot afford the expense and yet the Institute of N.S.W. or of Victoria may wish him to represent them. I think in such a case we should be able to help if possible.

**President:** If someone will move that the travelling expenses of visiting delegates at any centre be ascertained and that 50 per cent. of those expenses be borne out of the Federal Council's funds, the other 50 per cent. to be contributed by the States of Victoria and N.S.W. jointly, I think that would meet the case.

**Mr. Masters:** Would it not be better to take it all out of the general funds and increase the levy?

**Mr. Rutt:** Supposing the expenses are now borne by the States; if you increase the levy in that respect you cut down the expenses of the State Institute so far as its delegates are concerned. Supposing the expenses of the State delegates amount to £25, that has now to be paid by the State Institute. Instead of that, it would then come out of the per capita increase of the levy.

**Mr. Masters:** Tasmania voted £10 towards the expenses, and that means practically a 5/- levy on all its members on top of the other levy.

**President:** Will this do: "And that the amount be charged to the Council's funds, 50 per cent. to be repaid by the States of N.S.W. and Victoria, so long as the meetings are held in N.S.W. and Victoria." I think it will be rather difficult to ascertain the amount.

**Mr. Henderson:** I think the matter is easy on account of the fact that practically for the future meetings will be held in New South Wales and Victoria. It is to our benefit to have the meetings here.

**Mr. Waterhouse:** I think it is a very fair suggestion, and I do not think our Institute will have any difficulty whatever, but I personally would prefer to see the whole of those expenses or whatever percentage is necessary come out of the funds of the Federal Council.

**President:** But Mr. Laybourne-Smith has just told us how difficult it is for a State Institute, the membership of which is comparatively small, to get more funds for this Federal business.

**Mr. Laybourne-Smith:** On a point of order, I want to say that S.A. is the only State in the Commonwealth that has accepted every resolution of the Federal Council since the inception, without an amendment.

**President:** But they regard the expense as something outside.

**Mr. Laybourne-Smith:** The thing I would least like to face would be an increase in the fees for an indeterminate object. For the payment of the delegates coming here the S.A. Institute has paid the railway fares and sent two delegates to each conference, so that they have carried that burden very well.

**President:** Yes, and we are trying to relieve that burden. You said that you did not want to ask your members for more money. I was trying to get at some way by which N.S.W. and Victoria might take the burden from you in consideration of the benefits they get by the meetings being held in those States.

**Mr. Waterhouse:** There are, I think, two ways of doing this; either to pay the whole of the expenses out of the Federal Council funds, to be augmented in any way that we may decide; or it should be a matter to be dealt with entirely by the local Institutes themselves. We have the Federal Council; it assembles to carry on work for the benefit of the whole of the States, and I think it might be safely left to the States to deal with their delegates and their remuneration separately, and not interfere with this Council at all. But I would prefer the first alternative.

**Mr. Henderson:** The objection is that the further away from the centre the States are, the smaller they are, and the smaller their resources are.

**Mr. Laybourne-Smith:** The position is that the meetings of this Council were to be held in the capital cities in rotation. The Council has met in Adelaide, Melbourne, and Sydney, but we have not been able to get a quorum for the meetings in Brisbane or Hobart, and those meetings fell through, and we owe an obligation to those States through not having the Council meetings there. My amendment is that whilst the general meeting is held either in Melbourne or Sydney the return fares of delegates to the Annual General Meeting of the Council be paid by the Federal Council out of the General funds.

**Mr. Masters:** I would be pleased to second that.

**Mr. Henderson:** That gets you right down to the payment of fares on a per capita basis.

**Mr. Laybourne-Smith:** You will still be paying as much as you suggested, but it helps our dignity a little.

**Mr. Henderson:** I did not suggest we should do it as an act of grace; I only suggested N.S.W. and Victoria should do it as an act of justice—as a payment for a benefit.

**Mr. Waterhouse:** But it is a dangerous and unpalatable distinction.

**Mr. Henderson:** I will support the amendment.

**Mr. Hudson:** Before the amendment is put, which I support in every way, and I think it is the best solution, I would like you to consider the levy. The levy

that we have decided on is not going to cover this additional call on our funds. We will have to reconsider the levy for next year, because this should come into operation straight away. We want to get the delegates in Melbourne or Sydney for our next conference, and we will have to reconsider our levy; that is why I say I would like that matter cleared up before the levy is settled.

**Mr. Rutt:** This amendment places every member on exactly the same financial basis.

**Mr. Henderson:** N.S.W. will have to put in a 5/- levy next year.

**Mr. Laybourne-Smith:** I would point out this resolution is not yet binding on the State Institutes; they have to accept it.

**President:** Yes, but Mr. Hudson mentions this matter—it falls back upon your objection again.

**Mr. Laybourne-Smith:** No, because they have already been paying this money to us or their delegates but now it will fall back on the Federal Council.

**President:** Very well; the amendment is proposed by Mr. Laybourne-Smith and seconded by Mr. Masters.

**Mr. Henderson:** If I have permission I will with-

draw my motion and have much pleasure in seconding the amendment. Let my motion be expunged, and I will move Mr. Laybourne-Smith's amendment instead.

**Mr. Laybourne-Smith:** Mr. Henderson represents a State which has to pay a lot of money, and I would like him to move it.

**Mr. Waterhouse:** And I will second it.

**President:** Then it is moved by Mr. Henderson, and seconded by Mr. Waterhouse:

That whilst the meetings of the Council are held in Melbourne and Sydney the return fares of delegates to the annual meeting be paid by the Council out of the general funds.

Carried.

(To be continued)

## COMPETITIONS

COMPETITION.	CLOSING DATE.	REMARKS.
N. S. War Memorial ...	—	Approved.
Victorian National Memorial	30/6/23	Approved

## SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS AND THE 44 HOUR PROCLAMATION

Table of Hours, Wages, etc.

Trade.	Country, 48 hours.	City and Suburban, 46½ hours.
Bricklayers .. .. .	2/3½	2/4½
Builders' Labourers (State Award)	1/11½	2/-
" (Federal " .. .. .	—	—
Carpenters and Joiners .. .. .	2/1½	2/2½
Wharf Carpenters .. .. .	2/2½	2/3½
Painters .. .. .	2/0½	2/1½
Plasterers .. .. .	2/2½	2/3½
Plumbers .. .. .	2/1½	2/2½
Slaters .. .. .	2/3½	2/4½
	44 hours.	40 hours.
Quarrymen .. .. .	2/3½	2/6½
	Hardstone, 44 hours.	Sandstone, 40 hours.
Masons .. .. .	2/4½	2/7½

Other Trades—Award or Agreement Rates.

	Per hour.	
Electrical Mechanics .. .. .	48 2/1½	24/11/'22
Railway, Road, Bridge, etc.,		
Labourers .. .. .	48 1/9½*	26/1/'23
Crane Drivers .. .. .	48 2/7½	16/2/'23
Hoist Drivers .. .. .	48 2/4½	16/2/'23
	Per week.	
Builders' Carters .. .. .	44 £4/3/6	21/7/'22
Machinists (Gen. Joiners) .. .. .	44 £4/19/6	27/1/'23
Machinists' Labourers .. .. .	44 £4/4/6	27/1/'23
	* And upwards.	
<b>Price of Materials.</b>		
Bricks (Common) at kiln, per 1,000 .. .. .		72/-
Cartage of bricks to site (as per current rate)		
<b>Timber (Basic Prices)—</b>		
Hardwood, per 100ft. sup. .. .. .		33/-
Oregon .. .. .		35/-
Redwood .. .. .		70/-
New Zealand White Pine and Rimu (6in. wide)		47/-
Richmond River or Hoop Pine .. .. .		57/-
Cement, per three bags, according to quantity		20/- to 22/6



# THE BASIS OF TRUE CONSTITUTION

By Mr. S. M. Mould, A.R.I.B.A., F.I.A.

Mr. President, Sir Charles and Gentlemen.

My first intention was simply to make a few remarks at our Annual Meeting. While the nominations are being counted, there generally occurs an awkward lull in the proceedings, and my object was really to fill in this gap by introducing a subject for discussion which I deemed of vital interest to the welfare of the Institute.

I had no intention of making a speech. I merely intended to make certain opening remarks in order to stimulate the interest of the members and to encourage discussion, and now I find myself billed to deliver a lecturette, which certainly sounds very important and dignified. I feel compelled, therefore, to do my best to rise to the occasion by somewhat enlarging its scope and make an attempt to live up to the bigger standard which has been thrust upon me.

I will, therefore, deal with the matter in my own way, treating it in fuller detail as a more complete subject for our survey, and if only I can make members think, then I will have achieved my object, though by doing so it is quite possible that I may get more than I expect, like the Scotchman who brought home six prize hens. You may know the story.

Having to leave home, he left his four boys in charge of them, and on returning, found that they had neglected their duties so thoroughly that every one of the hens had disappeared. He told his boys that they must set out, north, south, east and west, and not return till they were found. Three of the boys arrived, each carrying two hens, and a little later the fourth son came home with one hen tucked under each armpit and a third dangling by the legs from his left hand.

Two incidents have occurred in connection with our Institute which may be regarded as signs of the times. One occurred only a week or two ago—a letter, written by our Council apparently in reply to some disgruntled members who wished to retire from our Institute. It seemed to me rather pathetic that it was necessary for our Institute to write such a letter. Either we were well rid of such members, or, on the other hand, the Institute was not playing its part and those members had good grounds and justification for their complaints. The other incident to which I refer occurred some months ago, and was in connection with the Martin Place controversy. In that case the ruling

of the Council was upset by the General Meeting of the Institute, and so strong was the undercurrent of feeling which this matter produced that had it not been for the pacific intervention and wise ruling of certain members of the Institute, it is quite possible that a split might have occurred, which would have wrecked our Society. In any event, certain acrimonious speech was engendered, and such speech and such feeling is not towards harmonious relationship, and therefore not for the welfare of this Society.

Now, the difficulty in approaching this subject is to determine where to begin; but as in most things in life the answer to almost every question is invariably the answer which is simplest and to hand, and so it is in this instance. "Where to begin?" Obviously, the simplest beginning is to begin with ourselves. We have always been taught that the first law in life is the law of self-preservation, and a desire to preserve our life resolved into proper terms is simply the desire for living. If the first law is self-preservation, and therefore, the love of living, we can reasonably say that the second law must of necessity be the desire to get the best out of our living. In other words, we are reduced to the very simple proposition of "Each man for himself and devil take the hindmost." Put in bald terms like this, I can quite imagine some people shuddering and saying that this is a horrible doctrine, but before we have finished I hope to show you that it is rational and that the people we should be wary of are those humbugs who profess to be doing us good turns at great sacrifice to themselves.

I need not dilate on this, but it is quite apparent if you will think along these lines, that a great deal of harm is being done in social and political life by false ideas of charity and benevolence, instead of the robust and more healthy method of setting people on their own feet to work out their own salvation.

In order to approach this matter, then, in a proper manner, it is necessary for us to imagine the individual at the lowest stage of primitive development. The study of our own Australia gives a wonderful example of what I wish to illustrate. Our Aborigines, we are told, were the lowest form compared with any race in the world, and for some reason or other they never developed. Under the circumstances, it is extremely interesting to observe that the tribal idea was not common. They lived, in the main, rather as indi-

viduals, each one separate from the rest, and as a consequence there was no building up. They lived in trees, or in caves. They could have no settled homes, because they had no one to guard them. They had no possessions, because they had no protection from any who might wander and take possession of what they might have accumulated. Miserable, primitive people, solitary, pathetic units, wandering about in search of food: This is a typical example of the very lowest form of human life it would be possible to find, and how easy it is to trace step by step the simple development which occurs. The man married, and the simple building up of family life called into being the desire to protect those who were dependent upon him, and further, there grew the desire to supply them with some simple luxuries in the form of permanent habitation and decent creature comforts. The next step was the formation of tribes, as it was found advisable for family to join with family in order to reduce pilfering and petty warfare. This came into being from the natural desire of the individual after finding that it was to their interest to respect one another's possessions as sacred. Their motive was not altruistic. It was sub-consciously born of a desire to get the best they could out of life and was indeed to their best interests. This idea of the value of co-operative effort naturally extended, and we have the germ which was to give birth to mighty nations, and as an outcome of the formation of nations there came into being, naturally, the wonderful conception of nationality, pregnant with possibilities of good and evil. And now, as a result of the great World War, which was the product of the ambition of nations, we are finding that history is again repeating itself, and that each nation is finding, as did the individual in his day find, that it will get the most out of life by co-operating with others, instead of being continually at enmity. The idea of the League of Nations is the same process of development going on, and the same principle expanding, which in plain terms simply means that we cannot live to ourselves alone, that we grow biggest and best, not when we are striving and fighting against one another, but when we are putting in of our best for the other man. Take two simple analogies. In Roman days the Governor was held responsible for the peace and welfare of his district, and similarly, in England, we have an extremely good case. Way down in sunny Kent, amongst the beautiful hop gardens of that little paradise on earth, there used to come from the slums of London every year, at harvest time, crowds of men, women and children to pick the hops, and after they had gone back to their slums there spread the gaunt spectre of disease and death. The disease-producing

areas of London had taken their toll out of these country people for their neglect to look after those who were unable to look after themselves, and there grew out of this experience some big movements, which were to do away with slum areas and which were intended to uplift the submerged tenth—as it is so called.

But the interesting point to observe is that we did it, not from altruistic motives, but for the same reason that we would cut out some festering sore, because if we did not do so, it would undermine our constitution and we would soon cease to enjoy our lives. Let us conclude this portion of my address by emphasising the fact that this is not mushy sentiment, but the basis of our action in the case of every development which is made, is honestly a desire that we should get out of life more than we have ever got before.

Having dealt with our address in more general terms, we now come to the application, as our Scotch ministers would say, and first I would like to deal with the internal development, and second, with our particular aims.

Constitution is just another name for Government; and Government is simply a matter of orderliness, or the proper co-relation and co-ordination of the parts. Now, how does this work?

In Society, if we again take the lowest form for purposes of clearer understanding, we find the desire for leadership.

This is but natural where one is dealing with people of scant intelligence; like sheep, they follow their leader; but even to-day the tendency to follow one's leader is not unknown, though we would be very much hurt if we were compared with people of low intelligence. We find a splendid example of this with regard to the Bedouin tribes of the desert, of whom a great deal has been written by many learned writers, but who are best known to the rank and file under the well-known names of Abraham, Isaac and Jacob, who led their people—so long as their people had intelligence enough to be led—though there were certain lapses, in which they suffered disorder and distress. This was the positive side of leadership, which is known as paternal, and they are still spoken of as the Fathers of their people. The negative side is seen in Russia, where you have the same sort of conditions, of people, unlearned and unlettered, very ignorant and requiring to be taught and led; but instead of the leadership being paternal, as it should have been, it was tyrannical and autocratic. It is, nevertheless, very interesting to observe that though the Russian Constitution had failed so miserably in bringing them forth from the captivity of their ignorance, nevertheless, curiously enough, the



Czar of Russia was always known as "The Little Father," showing that the germ idea was still there had it only developed. As intelligence enlarges with regard to a people, so there comes with enlarged intelligence the natural desire to find more expression on the part of the people, and thus we have the natural growth of representative Government, which we call democratic, and which is the recognition of the right of the individual to contribute every one to the welfare and well-being of the community. But, finally, there is only one logical sequence in this onward march. It is not Socialism, as it is preached, where the attention is focussed on the desire of one man taking from another, so that the rich may become poorer, the idea being that the poor may become richer. Such a condition implies utter confusion. No; the obvious conclusion is that as the intelligence enlarges, so their capacity must enlarge, and as their capacity enlarges their contribution should enlarge, and thus, instead of grasping and getting, the ultimate aim will be that of being and giving. To sum up, if a man is truly big, he will not need to have placards to announce the fact; it is only because we are so very little that we go about trying to impress people how important we are. And if he be truly big, his dealings will be big and the results will be correspondingly big.

Now, our Society is a little community in itself, entirely self-contained, and there is all the possibilities of advancement on the one hand or disintegration on the other. The question arises—what form of Constitution will be best suited for our interests? Which type most suitable? That is to say, are the members of so primitive a type that we require the leadership of some dominating personality; or are we in that half-baked condition that we can only be partially trusted, and that, therefore, a modified form of self-government is advisable? On the other hand, is the "*locus standi*" of the members approximately of an even level so as to justify a system of co-operation, where every individual is encouraged to contribute of his best for the welfare of the Society?

Referring to the incident of the Martin Place extension, it is interesting to put the situation to the test of the principles we have already laid down. It is quite impossible to say that there was co-operation, because in that case, if there had been co-operation there could not then have occurred the very grave digression. On the other hand, one can hardly say that there was even proper representation, or if there had been then the Council would not have been defeated, and so we are driven to the conclusion that the ruling of the Council was simply autocratic. By a policy of this sort, the Executive is likely to lose a

very great deal of that vital force which can only accrue when all the parties are bound together with a common aim, and when it is to the interest of every member to contribute of his best in the interests of the Society, and when equally it is to the interests of the Council to take advantage of this co-operation on the part of its members. And so one would expect that it would be the policy of a sound Executive to appeal and consult its members on all matters of policy and simply take in hand the work of carrying out in the best manner whatever had been determined, with the collaboration of its members.

The phrase, "Personal Service," is coming more and more into vogue. Our shopkeepers have got hold of it, and whenever shopkeepers adopt any principle, you can generally rely upon it that it is sound. They have evidently found that it pays.

Robert Louis Stevenson, years ago, said that the end of all art was to please. There is getting less and less room to-day for the man of big conceits, who is always thinking of his own glory. But you will observe that this development is just the same process being carried a step further, and that these principles are being adopted by shopkeepers and business men, because they are finding that they are extending their businesses and enlarging their operations and that personal conceits come under the category of pettiness, and that pettiness does not pay. The logic is perfectly clear. I know that as a rule it is regarded as bad form to refer to personalities, but exceptional cases deserve exceptional treatment, and I claim to be excused when I refer to our President, Sir Charles Rosenthal. In him we have a wonderful example of the truth I am trying to enunciate. He literally placed his services and his life in the hands of his country with single-hearted devotion to duty and absolute disregard of all danger, and as a consequence has won distinction and fame which will ring down the ages as long as the history of Australia is read. He has come back full of honours. The cynic will say it has paid. Let us disregard the cynic, but admit the fact that here again is a most striking instance of the giving of one's best, if we would expect to reap the biggest reward. Of course it has paid. It always does pay.

Our aim as a Society is to raise the tone of Architecture as a profession. As students—that the education should be thorough. As workers—that our love of the profession should engender love of our fellow craftsmen. Above all, that we should be men, and, better still, gentlemen. Not pedantic, as a result of our little learning, but seeking to find in the spirit of our work, inspiration to carry us forward and raise us to heights so that we may enjoy a bigger and a grander

outlook. If such a spirit could exist, there would be no need for rules of conduct such as have been circulated. In any case, I question the value of those rules, because, for to those who are trying to walk on decent levels, such rules do not apply, and those who do not intend to walk on such levels will certainly not abide by them. We have got to make our Institute of some use to its members. Many people who fought for registration urged that it was going to raise the standard of education and do all manner of wonderful things. It is more likely to make people qualify for registration and then lean back, satisfied, to practice, and make as much money as possible now that we have a close profession, because, undoubtedly, registration has established the Architect so far as his fees are concerned. Our preserves are protected; we have now a sinecure. Protection is not a robust policy. Under spoon-fed conditions we lose our vigour and vital force, unless we persistently press forward. The tendency will be to ignore the Institute. People soon forget past favours, and it is quite right that they should. If we wish to exist as an Institute we can only do so by continuing to give good value, and not by weakly referring to the wonderful work we did in the past.

Every year we have an Exhibition, which is supposed to be a very great event. It is one of the attractions; but how does it pan out? Many of the rejected exhibitors have shown me their work, and I am bound to say that, in my judgment, much worse was hung on the walls. But, in any event, what is the particular aim of this Exhibition? The results of the Selection Committee have hurt the feelings of many of our members very badly. They have been cut to the quick because they have been turned down after sending in their best. Of course, we are told that the standard was not good enough. But "standard" is such a variable quantity. A. Lloyd Wright, with his extravagant designs, would have one thing to say; Sullivan, of a similar school, would vary again, to the famous George Street, with his vital attachment to Gothic work; all so different, but all so positive, a veritable babel of schools conflicting with the Georgian—which is the present vogue. Couldn't our criticisms be more sympathetic, when they would be more helpful

and constructive? What is honestly our aim with regard to this Exhibition? Is it for glory or advertisement? Or are we, each one of us, exhibiting our best beloved work in order that we may profit by viewing each other's productions? Then, if our work happens to reflect some high quality of beauty, surely our pride should be tinged with modesty out of very gratitude, and in that spirit, when we look at our brother's work, how gentle will our judgments be?

What a very different Exhibition it would be! The pictures might not be so large, nor the colouring so intense. Some designs might lack the ultra respectable "reproduced" Georgian touch, but the feeling might still be respectable, and even refined. The frames would not be such a feature of the show, but how much more profitable; and what a wonderful "*esprit de corps*" it would create!

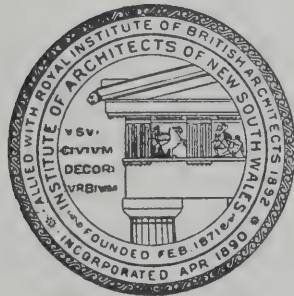
To sum up the whole situation, what is our Institute to be in the future? Unless we continue to draw like a magnet, the very need of our existence will soon cease, and though it may take years for disintegration to accomplish its work, nevertheless the end will come, and the process will be a very painful one. On the other hand, if we can get into our minds the idea of service, and if we can commence to regard our Institute as a club instead of a sort of armistice—I believe, Mr. President, that is the term to use—when men are at war with one another and for certain periods agree to a cessation of hostilities, it seems to me that the parallel is often true with regard to professional men. But it all comes about from the very foolish notion of imagining that our success is at the expense of the other man, instead of realising that the bigness of conception must always produce the big result. In which case, freed from any jealousies, but full of enthusiasm for one's work, we can meet and discuss the various problems which affect our lives, compare notes of our various performances, dream dreams, and formulate plans and schemes, certain at all times to meet friends and helpers amongst our fellow-workers, imbued with like aims and inspirations.

Nothing but a spirit such as this can give life to the old dry bones of convention and prejudice.



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



JUNE 15TH  
1923

VOL 12. No. 6

PRICE ONE SHILLING

# MINUTES OF AN ORDINARY GENERAL MEETING OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Held at 5 Elizabeth Street, Sydney, on Tuesday, 8th May, 1923, at 8 p.m.

**Present:** Sir Charles Rosenthal, President (in the chair), Messrs. A. Spain (V.-P.), H. C. Day (Hon. Sec.), I. C. McCredie (A.H.S.), and about seventy members.

The minutes of the previous meeting (10/4/23) were taken as read and confirmed.

**Apologies** were received from Messrs. Hadley, Vernon, and Peddle.

**New Member:** Mr. J. H. Hurst attended for the first time since his election as a Fellow of the Institute, and was welcomed by the President.

Sir Chas. said, that at the last meeting members were asked to make any suggestions (in writing) of interest to the profession, for discussion. None, however, had been received; they were again invited to do so.

**Annual Dinner:** The outgoing Council had left the

arrangements in the hands of the new Council. The Dinner was fixed for 22/5/23, at 7.30, at the Hotel Australia. Representatives of the various allied Societies will be invited to be guests of the Institute.

**Lecture:** Professor L. Wilkinson delivered a lecture on "Gardens," and showed some very fine views on the screen of gardens in various countries.

The President, in introducing the lecturer, said that Professor Wilkinson is the first Professor of Architecture at the Sydney University.

In the discussion which followed, the President and Messrs. R. Keith Harris, A. Spain, and E. A. Scott took part, and spoke in terms of appreciation of the many points of interest advanced.

A vote of thanks to the lecturer was moved by Mr. Spain, seconded by Mr. Scott, conveyed by the Chairman, carried by acclamation, and duly acknowledged.

The meeting terminated at 10.15 p.m.

## ANNUAL DINNER

Held at the Hotel Australia on Tuesday, 22nd May, 1923

Toast: "The Governor-General."

**Major-General Sir Charles Rosenthal, K.C.B., C.M.G., D.S.O.:** I am sure, your Excellency, I am voicing the deep sense of gratitude of every member of our Institute, and, indeed, I will go farther and say of every visitor present with us to-night, in having you with us at our gathering. Those who have followed your career since you arrived in Australia will realise, and have realised, that you have entered into practically every department of our Australian life; but what appeals to me as being the outstanding feature of that entry into our life is what it is going to mean to us a little later on, when your Excellency goes back to the other side of the world. We have been distinctly fortunate in Australia in those who have come out here to represent His Majesty the King. (Hear, hear.) Those who have returned to England have really and truly been ambassadors of this great country of ours. The late Governor-General, now Viscount Novar, entered into practically all our interests, and we architects particularly remember him because of his particular knowledge of a branch of our profession—Australian timbers. I venture to say, without fear of

contradiction, that half the gentlemen here do not know half as much about Australian timbers as Viscount Novar. Those who, in the Mother Country, control the destinies of our Empire, will, I am sure, be delighted always to have the assistance of those who return after filling the office of Governor in the Great Dominions. We feel sure, therefore, when His Excellency goes back to the Old Country, his knowledge will go a long way towards building that close bond of Empire, that unity throughout the length and breadth of the Empire, which we so cordially look for.

This dinner to-night almost synchronises with Empire Day, and that is very significant, because you will realise that never before in this State has there been such unanimity of purpose in the celebration of that day. His Excellency the Governor-General has consented to be present at a dinner here on that night, and other functions are taking place during the day which will carry our thoughts very vividly in the direction of Empire; not that any of us had reason to think otherwise at any time, because I am sure you have already learned that in this part of the Empire, big as it is, there is a very definite strain of the same



old blood which exists at the heart of the Empire. I will not say any more at this juncture, but will ask you to be upstanding and drink to the health of the Governor-General, Lord Forster.

**The Governor-General:** Mr. Chairman, ladies and gentlemen. I thank you very much for the cordiality with which you have received the toast of my health. I can assure you that I am very glad indeed to be here to-night, to show by my presence—if in no other way—the interest that I take in the future of architecture in this great land.

General Rosenthal alluded to the fact that we people who come from time to time to represent the King in the Commonwealth are able to do useful service to the Commonwealth on our return to the Mother Country. I am happy to say that I have not begun yet to think of my return—(Applause)—and when the dreadful day arrives, I can assure you it will be with very mixed feelings that I return home, leaving a very, very large portion of my heart in the country I have come so dearly to love.

I think there are reasons why anyone who holds the office I have the honour to fill should feel interest in architecture, because it is not so very long ago since I came to Australia as a stranger coming to a strange country, and I very well remember the impressions that my mind received when I first arrived. I think people do not realise sufficiently the impression that is made on the mind of a newcomer by what he sees when he first arrived. If he sees evidences of prosperity; if he sees fine, substantial buildings, he naturally receives a favourable impression. If, on the other hand, he sees things that are the reverse, he naturally receives impressions that are less favourable. So I want to emphasise to-night the importance, from the point of view of the Commonwealth, of good architecture in our great cities, and not only, of course, in our great cities, but throughout the country. I think no one can doubt that in this country there is a great future before the architects. There is a great and growing demand, and I hope it will grow with increasing effect, for new houses, for new buildings, for the employment of the architects skilled in all directions. I saw in the paper, a few days ago, an article in reference to the activities of the Universities, in which mention was made to the over-manning of the medical and the legal professions. We wish the gentlemen engaged in those professions every success, but I do not think we can honestly pray for the ill-health of the general community of Australia, merely to give profitable occupation to gentlemen of the medical profession. Neither do I think we can honestly pray for an excess of those quarrelsome attributes of the human character which will give a profitable occupation to an ever-increasing

army of lawyers. But in your profession, gentlemen, I think we can honestly pray for an increase of scope for an ever-increasing demand for your services in the improvement of existing buildings, in the erection of fine buildings devoted to scholarship, to University life, to ecclesiastical activities, and public offices. So that I hope, that in the course of the near future, you will find ever-increasing scope for your branch of art and science.

It seems to me that architecture resolves itself into two main branches. There is the branch of public architecture, the erection of great public buildings, and so forth. In connection with that, I hope those who are entering into the profession will use every opportunity that they have, or may be able to find, to go to Europe and to make themselves acquainted at first hand with the great works of the architects of centuries ago. I do not think anyone can really grasp what architecture can be made to mean until he has seen with his own eyes those historical buildings in the old countries of Europe. I heard, a short time ago, a story which illustrates what I mean—it is the story of a schoolmaster who was endeavouring to describe the beauties and the glories of St. Peter's, in Rome; and when he had told them all about St. Peter's in Rome, after he had described its wonderful dome, its vast spaces, and all the rest of it, he asked one of the class if he thought he had got it, and the boy said: "Well, sir, I suppose perhaps it is like our General Post Office." To compare St. Peter's in Rome with a general post office, however fine the general post office might be, showed that the boy had not fully grasped what the schoolmaster had hoped to convey. And I do not think it is possible either by the study of pictures, plans, photographs, or letterpress, or anything else, to gather the full meaning of architecture in the way you can by personal acquaintance.

Turning for a moment to the other branch of architecture, the domestic, I should like to offer a word of advice to the younger members of your Society, and those who come after them, and the advice I should give them is: Marry a wife as soon as possible. A wife who will bring to the study of your business and your plans practical knowledge derived from love of home, and, I may add, acquaintance with its difficulties. You will find, if you submit to her the plans that you draw for the homes you are called upon to build, she will have many most practical suggestions to offer.

I do not want to take up your time. I may have something further to say later on. But I commend what I had said with regard to domestic architecture to those young men who are not already placed with the wife that I have described. I thank you very much indeed for your kind reception of me to-night; I can

assure you it gives me a very real pleasure to be here. (Applause.)

#### Parliament.

**Mr. E. A. Scott:** The honour has been conferred upon me to propose the toast of the State Government and Parliament. It is an honour indeed in this democratic country, where we attach great importance to our Parliaments—we have a great many of them. We have with us to-night the Minister for Education, and it is a great thing that we have a Minister for Education who really believes in education, and we can congratulate him on his endeavours to obtain from the Government sufficient financial support to carry out his ideas.

Many Ministers for Education in the past have tried to do this. The present Minister has been more successful than most of them. Education, I am certain, in the mind of every man present, is the most important blessing that can come to any man during his lifetime. People in this country are in the habit of thinking education may be harmful to the working classes. A greater mistake was never made. I remember I had in my employ once a bricklayer who was a Master of Arts of Glasgow University—and Glasgow University is no small one. I can assure you he was a very eminent bricklayer, and a first-class man in every respect. Education was no harm to him in that way. In the past, when I have been asked to propose this toast, I have felt very uncomfortable, because past Governments have not always treated the Institute in the way we should have liked. We used to invite the Premier, and the Minister for Education, to our board to beguile them to give to us some little consideration, and it is an unpleasant thing for a man to invite a person to his board and then ask something of him, or abuse him for not having granted a request. Things have now changed within the last year. The Government of New South Wales, and the Parliament, have extended to the Institute of Architects and the architectural profession that consideration which we consider our due, and they have done almost everything we ask—and architects are in the habit of asking a good deal. I would therefore point out the good things they have done. For many years we asked, first of all, for a Chair of Architecture. We despaired of ever getting it—we were a small community then, and architecture was not so much appreciated by the inhabitants of New South Wales as it is now; we were then probably 150 to 200 strong, whereas to-day we are 700 strong, and we have more weight in the community. We asked for registration, and we asked for a Chair of Architecture, and we even offered to provide £500 a year for three years to help to endow that Chair. I well remember attending on the Minister for Educa-

tion then, Mr. Griffith. He was absolutely astounded at the impudence of the small Institute suggesting to the Government that we would give £500 a year towards the support of the Chair of Architecture in the University. He said he considered that a thing so necessary should not ask for the support of such a small body as the architects of N.S.W. Nevertheless, we did not get our Chair for a long time. Now we have got it, and I feel that we will derive great benefit from it. (Hear, hear.) Not only ourselves, but the future generation of architects and the public of N.S.W. It is too early yet to decide what benefits we are deriving; it takes more than three or four years of education and lectures at the University and training in architects' offices to decide what an architect is going to be. It takes years of practical experience before we can see what will be the outcome of our University training. I have no fear. While on this subject, I would suggest to the Minister for Education that he carries his good work a little farther, and that he will remember, that at the end of the ordinary course of University training these young men and women who have availed themselves of the opportunity which has been created for them to attend the University and the Architectural School, will have to go out into the world to earn their living. What are they going to do? As University-trained men they are naturally trained in what I will call, for the sake of a better word, pure architecture. The majority of architects do not get that in their practice, and I would suggest to the Minister that he suggest to the Government that an opportunity should be given to these young men, trained in designing real architectural work, to show what they are worth. Either select real promising young men from amongst the classes, or throw open to competition some of the Government buildings, so that they may have an opportunity of showing what they are worth. It will not cost the Government anything; it may save them money; but it will give these young men an opportunity to show what is in them.

Then, again, registration is another thing we battled for for many years, knowing full well it was not going to benefit ourselves, because it will take, anyhow, twenty-five years, until a good many of us die out and the dross, as you might call it, is cleared off, and a new class of architects is established in this State. With the assistance of the University and advanced education—which we older men never had an opportunity of availing ourselves of—I think registration, with the establishment of the Chair of Architecture, will do a great deal of good. These are the things that the Government of the present day have done for us; therefore, I have the greatest pleasure in proposing their health. As a rule, one rises and formally says



he has much pleasure, but from the bottom of my heart I say I have much pleasure in proposing the health of the State Government and Parliament.

While on the question, I may say it is natural that on this occasion we should state some of the things we want from the State just now. I want to see the young men turned out from our University given an opportunity to design these buildings; and I will state another thing now that I do want to see, and that is the Government supporting the City Council in the extension of Martin Place. I was on the Royal Commission in 1909, and we all agreed to it, but up to the present the matter is not settled.

Gentlemen, I would ask you to be upstanding, and drinking to the health of the Government and Parliament of New South Wales.

**Hon. A. Bruntnell** (Minister for Education): I appreciate very much the generous way that Mr. Scott proposed the toast of Parliament and coupled my name with it. As a rule, I think a politician's life is aptly summed up in Bulwar Lytton's famous phrase: "A quick alternation of kicks and kindness." It is pleasant to come to a function of representative men and hear them say that the Government has done something of which they feel proud. Whatever may be said of the Government now in power, I think it will be admitted that they have had the one great essential of a good government, that is, courage; for the first piece of legislation that they dared to introduce was the reduction of the salaries of members of Parliament. I want to assure you, that while it is quite an easy thing to promise such a thing on the hustings, it is a rather difficult thing to get crystallised into actual legislation. However, we managed to do it.

Another thing that has been dangling before the people of this country for some fifty years or more has been the famous North Shore bridge, and that Bill has been put through, and the bridge will, I hope, in the very near future, be commenced.

I am not wanting to recite the doings of the Government, but I want to say, that I think one of the most valuable and important pieces of legislation that we have enacted in our Parliament for many years is what is known as the agreement initiated by the Hon. R. T. Ball, Minister for Works and Railways, in conjunction with the adjoining State of Victoria, in the granting of the right to Victoria to build certain railways into N.S.W. and the Riverina country, and certain bridges across the Murray River. I do think that a foolish prejudice has hindered the development of that very important part of the State for many years, and I think that this piece of legislation rises to the level of statesmanship. The fact was evident to anyone who looked into it, that the natural market for the com-

modities that would be produced in that area was Melbourne, whatever we might say; and to have stood in the way of the development of our own State because of that fact was, I think, evidence of lack of political vision.

I believe that the first session of the present Parliament, notwithstanding the many difficulties that beset it, and the peculiarities of a Parliament constituted under the new system of proportional representation which gives minorities representation in Parliament, and because the House was so constituted that it had an unusual preponderance of young members, was, although an arduous session, on the whole, a very successful one, and this has been followed by the pronounced success of our distinguished Premier, Sir George Fuller, in the Mother Country. It must be pleasing to everyone who is anxious to see this young Britain of the Southern Seas advance, to find that our Premier has been able to make such excellent arrangements for emigration to this country of suitable persons, to help us to develop its great resources and potentialities, and to join with us in the building to a greater extent than ever of this young nation. I believe there is a great future before us. We have the very serious difficulties of the drought, and many other problems engaging the attention of the Government, but I ought to say, that so far as I have seen I have never known a body of men tackle their duties more earnestly and more seriously, with a desire to do good for the whole of the people the whole of the time, than the present Government. Notwithstanding the many kindly references that have been made to us by a benign Press, who are always very careful to point out any differences that there may happen to be between the members of even the Ministry, I want to assure you that the best spirit and the best harmony prevails among the Government, and they are working together as a team for the general good of N.S.W.

It must be evident to anyone, that whatever ideals an individual member of Cabinet may have, he must work together with his colleagues for the general good of the whole of the people, even though at times he may not be able to realise all he would like to realise in any particular direction. I think that is the spirit that animates the Government.

You have mentioned the Department over which I have the honour to preside. I do think—and I know you will not misjudge me when I say this—that the Department of Education is the most important department in the State. What is the good of the Institute of Architects, or any other Department, if you have not got educated men to guide, to lead, and to instruct? I think we have not in the past realised that fact as fully as we ought to have realised it, and

the difficulties that confront one to-day are very many. One of the most serious difficulties that I found when I took charge of the office, was the serious neglect and shortage of accommodation in our primary schools. It is obvious you cannot have a compulsory and free system up to the full primary course without having proper hygienic accommodation for the children who have to attend those schools, and while you may not be able to accomplish all you would like, and do everything that needs to be done, you want to do something, at any rate, and to be able to say at the end of your term that you have bettered conditions in some respects at least. So I devoted my energies to the securing of sufficient money to enable us to provide proper accommodation—good, substantial buildings, well lit and well ventilated—for the 97 per cent. of our children who attend our primary schools. It is our duty to provide not merely accommodation, but the effect that good healthy accommodation will have upon the future lives of our children will mean an immense saving to the State in hospital expenditure, because Dr. Truby King has made some remarkable statements as to diseases from which older persons suffer that could be prevented by better attention earlier in life. So we are endeavouring to focus our attention on that aspect, and by this means to improve the general health of our children. That will mean a great deal. We also are trying to give a practical tinge to the policy of education. I am not going to endorse the statement which appeared in the Press, that the professional channels have been overcrowded. I am unable to say that, but I do think it wise in a country like this, with certain possibilities of production before us, that we should encourage agriculture and junior technical education particularly. We are endeavouring to do that. The main purpose that actuates us in the Department is that we might turn out through our schools a good type of citizen. I think Emerson was severely right when he said that the future of civilisation does not depend so much on the growth of the city, or the census, or even of the crops, so much as it does upon the kind of citizens we turn out. I am anxious to see pass through the schools of our State and become absorbed in the general life of this young country, a good type of citizen, who will abandon the foolish, hurtful, damaging policy of preaching class hatred and class consciousness; young men and women who will absorb the higher and nobler elements in life, and who will work in the future of this young country in the fullest harmony and sympathy with the good old Mother Land. Empire Day, as you have said, sir, is very closely approaching, and while probably our great day in Australia is Anzac Day, because of all it means to us, yet we are concerned with and honour, and shall

be honoured on Thursday next, in what I believe will be the most remarkable celebration of Empire Day that we have yet known. The people here are beginning to realise more fully than they have ever realised, that we live and move and have our very being in an atmosphere that is fragrant with freedom and laden with liberty, and these inestimable privileges have been handed down to us to preserve and pass down to posterity as a peerless and priceless heritage for their use.

I thank you on behalf of the Government for the kindly things you have said; and you, ladies and gentlemen, for the way you have honoured the toast.

Toast: "The Institute of Architects."

**His Excellency the Governor-General:** I have in my time been called upon to make speeches on a considerable variety of topics. With many of them I am tolerably familiar, and therefore speech-making is a matter of less difficulty than I find it to be to-night. To-night I have the honour of proposing the health of the Institute of Architects, and lest I should be unduly discursive in proposing that toast, I have taken the precaution of making a few notes, to which, with your permission, I shall refer.

First of all, I should like to say in proposing this toast, that it is, I think, an interesting coincidence that this, my first visit to the annual banquet of the Institute of Architects, should take place in the early part of the bi-centenary of the death of Sir Christopher Wren, the most famous, if not the greatest, British architect that has been known. It appears to me there is a certain similarity between the great opportunity that was offered to Wren at the end of the seventeenth century and that offered to Australian architects to-day. In his case, the re-building of London after the Great Fire, in your case, the building of Canberra, the new capital of the Commonwealth. It might be said that 200 or 250 years ago, in a non-utilitarian age, when beauty of art and architecture was more widely appreciated, architects had more scope than they have to-day. I think that is not altogether true. St. Paul's Cathedral, as built, is very much whittled down from Wren's original design, and it is on record that he drew up a wonderful scheme of square and vistas which, if carried out, would have made London one of the most beautiful cities in the world; but it was turned down for lack of funds. So, even in those days there was a shortage of money, similar to that which we all deplore in these modern times.

A retrospect of Sydney's architectural development invariably commences from the period of Governor Macquarie, 1817, whose architect, Mr. Francis Greenwell, erected many buildings which to-day are valued



at least by architects, and it is hoped that the interest of the public will be sufficient to safeguard them for many years to come. St. James' Church, King Street, and the old Barracks at the opposite end of the Square, are good specimens of his work. Governor Macquarie's name will ever be inseparably connected with Sydney's earlier architecture.

Next in order is the work of Edmund Blacket, who was responsible for the fine group of main buildings, including the Great Hall, at the University, St. John's College at the University, and St. Mary's Cathedral, the work of Mr. W. W. Wardell, add other fine pieces of work and a revered name to our architectural history. Then the work of J. Horbury Hunt, the first President of the Institute, ranks high, and his splendid knowledge of the use of materials is evidenced in the Cathedral at Armidale, Tudor House at Moss Vale, and many fine country homes. These men—Greenwell, Blacket, Wardell and Hunt—blazed the trail, which, I hope, will be worthily followed by the new men now availing themselves of the course of architecture at the Sydney University. We are, I think, too near the work of contemporary architects to properly place a value to their work, but I have been struck by many fine buildings in the various States through which it has been my privilege to travel.

I said, when responding to the toast of my health, that the impressions which a new arrival receives depend largely upon what he sees. Let me give you in a sentence the impression which I received when I first came to Australia. In every city of importance that I visited I found buildings which appealed to me very strongly indeed, not only from the essential quality of their design, but from the way in which the design had been carried into effect; and I think that we may congratulate the architects of to-day, not less than the architects of by-gone days, on the excellency of the work which they have produced.

With registration and the Chair of Architecture at the University, to which reference has already been made, we may confidently hope for a bright future for architecture in Australia. I think this is the more satisfactory, speaking generally, of architecture in Australia, both past and present, when we remember that the development of Australia has lain within a period that was, to say the least of it, frightfully lean in Great Britain. It has only been within the last few decades that interest in architecture has been revived. London, in the days of my boyhood, could boast of hardly any modern building with any pretension to architectural value, but during the twenty years before the War there was a great development, both in public interest and in the outcome of architectural skill in the buildings which were erected.

There has been an increased interest also in something which I think is of equal value, that is, in town planning. It has come to be realised that a few beautiful buildings do not make a beautiful city, but that a few bad buildings at critical points may ruin the whole aspect. Town planning of a scientific character and on a considerable scale is only made possible by public interest and without public interest the work of the architect—I am speaking now entirely of public architecture—cannot come to full fruition, because public interest means money, and without money the architect is unable to carry on. Times are vastly different from what they were centuries ago when people were willing to work for their keep and for the salvation of their souls. People look at it from a different point of view in these days, and we no longer see people cheerfully embarking upon a work which they know from the start will probably take a century or more to finish. We do not do things in that way in these times. It is a pity, perhaps, that we do not, because in the building of a new capital which shall be worthy of the great Commonwealth in which it is to be situated—Canberra—there is such a wonderful opportunity. I am quite sure all of you gentlemen who belong to the profession would be glad to assist in every way in the development of that great opportunity. But we have to face the facts of the situation, and the governing factor in the situation is that since the War money is even more difficult to come by than before it. Everyone will realise that although the opportunity offered by the building of a new capital is great, we are building for posterity even more than we are building for the present time; therefore, however impatient we may be to get on with it, to lay plans for it, and to see those plans carried into effect, under present conditions it is impossible to do otherwise than to proceed upon merely temporary lines, always preserving the great plan upon which the capital is designed till opportunity offers of clothing in permanent form the conception of a great capital worthy of this great land.

Gentlemen, I hope that at any rate some of you may have an opportunity of taking a great and important share in this great work. I hope that a long and useful future opens up before the Institute, and I now ask you to drink its very good health, coupled with the name of Sir Charles Rosenthal.

**Sir Charles Rosenthal:** Your Excellency, and those visitors who have kindly drunk this toast. Being President of the Institute of Architects for the time being is a privilege I deeply appreciate, but it also carries with it responsibilities, and not the least of those responsibilities is responding to this toast on behalf of the Institute.

First of all, let me say how very grateful we are that the Governor-General not only kindly accepted our invitation to-night, but also so kindly proposed the toast of the Institute. We can always appreciate a kindly word when it is given, and I am quite sure we all appreciate the very kindly words of His Excellency. We have round the festive board to-night representatives of kindred societies, and the toast of those societies will be proposed by Colonel Spain, when we hope that the senior representative of every one of those societies will have a few words to say. Those societies have been invited to be represented here to-night because they are closely allied with us. In modern times architecture does not stand by itself any more than it did in olden days, and to-day, more than ever, the engineer enters into the work of the architect; the surveyor also enters into our work because of its relation to town planning generally. In fact, there never was a time when kindred allied societies could with better advantage pull together than in this year of grace. I think that in the City of Sydney we have set the pace for other cities in Australia by showing that kindred societies are pulling together here, and every day other bodies seek the assistance those societies can give them. Amongst our number there are many who have been privileged to serve their country in the past few years. That privilege was doubly valuable to us because many of us, myself included, had opportunities of seeing the architecture of the old world to which Your Excellency has referred, and which, speaking for myself, I would never have been able to see but for the opportunities which came to us then. After all, during the War, some experiences were painful and others were pleasurable. There were opportunities of getting to Paris and of getting to the cities of England, Scotland and Ireland, and in every one of those cities we learned lessons which are now of great value to us in Australia. Many of us have studied the life of Napoleon and we have appreciated the great military genius of that wonderful man, but I want just to touch on the value of Napoleon's work to Paris. He looked well ahead, and Paris to-day owes a tremendous amount to the foresight and ability with which he was able to bring round him men with professional knowledge and skill. Who will say that in this great city of ours, Sydney, the city which grew like Topsy, there is not ample need to-day, and has not been for long years past, ample opportunities for co-ordination of effort by members of the allied professions. Reference has been made to Martin Place. I am privileged to be one of the members of that much maligned body, the City Council. We have had a painful experience with regard to that work; but

whatever may be the difference of opinion amongst the public generally and professional men regarding that work, there is a national value associated with it which is surely bigger than any of the difficulties. I know the public are broadminded enough to realise that the interest of architects in getting the work forwarded is not purely monetary, but it is that by virtue of our training one has learnt to visualise the buildings of the future and to visualise what this City of Sydney should be. I do not want to be referred to, in the years to come, as one of the City aldermen who had his eyes at the back of his head; I want to be one of those of whom it can be said that whatever were our shortcomings and failings, shortsightedness was not one. I hope that this great improvement will be one only of many. The Regional Plan Conference of Sydney is now laying the foundation upon which we will later build. The City Council recently passed a resolution inviting the co-operation of all local governing bodies with a view to their getting together and deciding upon the first essential, which is a contour plan of the whole of the Greater Sydney area. We cannot build before we first of all decide how our main arterial routes shall run. I am referring mainly to outside the city area.

I feel that the architects have the ability, they have the civic pride, and the good citizenship which will impel them to do all their talents will permit them to do in building up this great city. You yourself, Your Excellency, in your capacity as Governor-General may really be termed a builder. You are helping to build up and strengthen, out in this part of the Empire, those ties which mean so much to us. The architects, too, are builders, building not only material things but character in those who are coming after them and who will be adding to the technical skill which belongs to our profession. Reference has been made to-night to the advantages possessed by students to-day. One has only to look back to the time when, as the only son of a father who had not much of this world's goods, I was articled to an architect for the dreary term of five years. My father had to pay a premium, and I worked four years without a brass farthing; in the fifth year I received the magnificent dole of 5s. a week. Compare that with the prospect of the youth of to-day who elects to take up the architectural profession either in an office or in the University. One calls for the co-operation of the brilliant young student of to-day, who is given so many magnificent opportunities which were denied to older men, to pull side by side and together with men who are their seniors in years and who have more practical experience than they, even although they may not have had an opportunity of expressing the



talent that is within them. So if these two pull together with the other allied societies to which I have referred, I think we will go a long way in building up this Golden City of the Southern Seas, which, in my humble opinion, will become the second city of the British Empire. We have magnificent material at our disposal, and I do feel that in the architects of N.S.W. we have a body of men loyal to the core as Empire men, loyal to the ideals for which the Empire stands, and ever ready to do all they possibly can to build up not only the City of Sydney but other cities and country towns in our State and to make them all the better because we have passed through this way. We are very grateful for the remarks you have made to-night, Your Excellency, and I hope this will by no means be the last time upon which we shall have the pleasure of your company with us.

**Toast: "Kindred Societies."**

**Colonel Spain:** It is indeed a privilege to have been given the honour of proposing the most important toast this evening that of Kindred Societies. On behalf of the architects of New South Wales, I am only too delighted to take the opportunity of extending a welcome to those important bodies. I think the opportunity is now ripe, and it is indeed gratifying to know that the Municipality of Sydney has recognised it by calling a conference to go into the question of reconstruction of this great City of Sydney. We have an organisation which is appealing to the public to provide resources by which we can carry into effect a reasonable plan. We have had some most excellent advice from the Governor-General and our Chairman, and we might now regard the ball as being at our feet and that we should bring to a successful issue a regional plan for the reconstruction which is so sadly wanted. It is gratifying to think that the various institutions concerned have fallen into line to assist the Institute of Architects by meeting in conference to discuss what is the right course to adopt in bringing the scheme to a successful issue. I hope representatives of each of the various Institutes represented will have something to say on this important matter. I again extend a very hearty welcome to those representatives, and ask you to be upstanding to drink to the health of Kindred Societies.

**Mr. Cowdrey** (Institute of Surveyors): I appreciate the honour of being the first to reply to the toast. I take it as a somewhat belated recognition of the fact that the profession of surveyor is the oldest profession known. At a meeting some three or four years ago it was claimed that the architects were the oldest profession, but I have been to some little trouble to look up some of the old records, and I

find there was a surveyor within the Garden of Eden. The Garden, we may assume, had been brought into some sort of proper order, and we may take it that a surveyor was employed to define the boundaries, therefore it seems fair to claim that the surveyors were the first profession. I have tried to find out when was the first record of any building being erected, and we find in the fourth chapter of Genesis that Cain begat Enoch and builded a city; so that it appears that the first criminal homicide was also the first architect. I think the architects are to be congratulated on having outlived these very unfortunate antecedents; so much so that to-night kindred bodies, scientists, and even the Governor-General may sit at the festive board with them. I was very glad to hear Colonel Spain and the President speak of the regional plan. We are very happy to fall into line with the architects in this matter, and hope some good will be done. Some months ago we met in this room, and the scheme was initiated. We now want every professional man to do all he can to further the great object we have in view.

**Professor Warren** (Institute of Engineers): I very much appreciate the privilege of being here to-night and meeting the members of the Institute of Architects. We do not know when the profession of architect started, because we cannot trace it to its very beginning, but from the earliest times architecture and the buildings produced by architects form the history of civilisation. If one goes back as far as it is possible to do so, to the temples of Egypt, at Luxor and Karnak, and the Pyramids—all these are very ancient, but they could not possibly have been the beginning. They had achieved a considerable amount of excellence in their design and construction at that time. Then go to India, and see the marvellous work at the Taj Mahal at Agra, built in the time of the great Shah Jehan, another example of ancient architecture. There is no doubt whatever that the Greeks received very considerable inspiration from the works in Egypt. They perfected, among their many beautiful buildings, the five orders of architecture with which you are acquainted. Then come later still to Rome, and you have the somewhat modified representations of these orders of architecture in their various buildings. You have the great cathedral in Rome, and the fine specimens of Gothic architecture. You have St. Peter's, and the Cathedral at Milan, as typical works representing the architecture of those times. There is one feature which appeals to me, which stands out very prominently, and that is, the great master builders of those days were architects, certainly, but they were much more; they were painters, they were sculptors, and they were engineers. Michael Angelo and

Leonardo da Vinci represent the type I am referring to; they were great all-round men. The architect to-day is an all-round man, but these men were of much broader vision even than that, of necessity. Since then we have developed, our materials have increased, but the ancient architect did what the modern architect tries to do, that is, to adapt the materials at his disposal to the uses and convenience of the community in which he lived. The advent of steel, concrete, reinforced or otherwise, has made a great difference in architecture; and although, in the past, engineering was included in architecture, engineering is a modern profession. The old master builders were engineers. It was a very long time before there was a distinct profession of engineers, and they came into existence mainly from the construction of railways, which necessitated bridges and construction works of various kinds. Then came electricity, with its manifold developments, and we got the profession of engineer. The profession of engineer was dissolved in the architect in ancient times, and he is not away from it yet—and I hope he never will be. The two professions are intimately associated with each other—one cannot get on without the other. The architect will undoubtedly be prominent in all structures where artistic representation is necessary. The engineer works in a utilitarian fashion—I do not say the architect does not, because he has to sometimes. You would not ask an architect to build a bridge across the harbour—that is an engineering work—but I hope they will ask an architect to design the abutments to the bridge. Then, again, there are many great buildings which the architect must control, but he might let the engineer design his foundations, if they are difficult. What I want to emphasise is, that we are intimately associated with each other to-day, although our functions are not inclusive, as they were in ancient times. I hope sincerely that the Institute of Architects will develop and prosper. I am quite certain it has been an enormous factor in the building of Sydney. The architect to-day has great opportunities, and, in connection with town planning and all these matters which make for the good of the city, I have the greatest respect for their profession.

**Mr. F. Ure Smith** (Society of Artists): I have great pleasure in responding to the toast on behalf of the Artists. Art and architecture are certainly sister arts, and I feel that in the past in this State they have not been very closely allied. I think that is a very great pity, for I feel you gentlemen sometimes fail to realise that the artist can be made quite a useful person for the community, especially in conjunction with the public taste in Australia. There is no doubt that art in this country now has greater recognition

than it ever achieved before. Twenty years ago the artist had to leave Australia in order to survive. It is now rather interesting to observe that our artists who have been resident in England have to come to Australia in order to survive, and when they do come along here I think they realise they have a better future, for I am one of those who believe that we have a very great future in this country. With architecture also the progress has recently been most marked. It is only necessary to attend the annual exhibition of your Institute to witness that, and it is very interesting to note that the architect of to-day has the vision of a future generation in his mind, whereas I think it was lacking a few years ago. For, after all, we are all working for future generations, and with the birth of the Sydney Regional Plan, and also with the School of Architecture so ably conducted by Professor Wilkinson for the student of to-day, with this great conception of a finer and a better city, it speaks well for the future of architecture in this State. There are many ways in which the artists can, I think, help in directing taste in this city. There is, I believe, a Federal Art Advisory Board, though I think its powers must be very limited. As far as I know, there is no State Art Advisory Board. I feel quite sure, that if we had a competent Art Advisory Board, the present designs on our coinage would be altered and the note issues would be something to be proud of, instead of something to be ashamed of. His Excellency mentioned one's impressions on first landing in this country. Think what impressions visitors to this State must have on first seeing our State trams with those dreadful advertisements on them; also our hoardings, which also are a disgrace. These details could all be ordered and simplified if we had a State Art Advisory Board, composed mostly of architects and artists.

I have much pleasure in responding to the toast.

**Mr. Lister Lister:** I have not very much to say after listening to my friend, Mr. Ure Smith, who has made a very fine speech, and saved me a good bit of trouble in making up one. I might say that I have been very close friends with most of the architects in the last thirty years, and have found them a very fine lot of fellows, and a clever lot of men. They are something like artists: always look well and prosperous, and waiting for commissions. Every time I come to these banquets it seems strange to me to see how prosperous and well they all look. I think they can beat the painters. I also admire them for the way they keep up with the times. They seem to be not only architects but engineers. When one looks round Sydney and sees the large buildings going up, made of steel and iron, and all sorts of things mixed up with the design, I really think they are a very clever lot of



men. I thank you for the way you have proposed the toast and spoken of the very nice qualities of kindred Societies.

**Mr. P. Beddie** (Master Builders), on behalf of the Master Builders' Association, thanked the Institute of Architects for the hearty manner in which the toast had been received. His Association was probably more intimately connected with the architects than any other body in the State, and he could vouch for the high esteem in which the Institute was held. Many present-day architects were erecting monuments which would perpetuate their names and fame as architects for many years to come. The two Associations had been associated in many movements with satisfactory results. Two great boons now obtained were the conditions of contract and the quantity system; the latter was a guard against a contractor making any very extensive mistake in his estimate, secured a more uniform tender for the architect, whilst protecting the owner against being charged for work not performed. He congratulated the Institute for the interest taken by the members in technical education, which, he felt sure, would have a great effect upon the lives of the young men now receiving education. The greatest difficulty which builders met with to-day was the shortage of skilled labour. With a view to overcoming this, the Master Builders' Association, in conjunction with the Brickmakers' Association, had recently started a school, each body putting up £1,000, and they were giving young men of 18 and upwards three months' training, at the end of which time they proposed to draft them out amongst the different builders. In the first three months they had turned out 21 boys. These boys had been under the care of a highly skilled foreman bricklayer, who spent the whole of his time passing from one to the other, putting them right in regard to any mistake they might make. The result was, that at the end of three months they were fully equal in skill to an ordinary apprentice with two years' training. Unfortunately, the Bricklayers' Union had adopted an antagonistic attitude in several cases where it had been proposed to employ these lads. The Union did not object to skilled workmen being brought from the Old Country, but they apparently objected to the unskilled Australian boys of 18 years of age acquiring knowledge. According to the Union, these boys must go through life as unskilled labourers. This was to be deplored, and he hoped that the Ministry would help these boys who, probably, owing to stress of family circumstances, had reached the age of 17 or 18 without commencing to learn a trade, and who seemed to have no prospect but that of being unskilled labourers for the rest of their lives. He wished the Institute of Architects every success, and trusted the

members might long be spared to design buildings and issue certificates.

**Mr. Bassett-Hull** (Linnean Society), said that it was the duty and pleasure of the members of his Society to make a scientific study of the architecture of nature. It was the duty and pleasure of architects to make a scientific study of the nature of architecture, therefore, to that extent they were kindred Societies. It would be admitted that much, if not all, of the beauty and utility of public and domestic architecture owed its origin to the architecture of nature, consequently science and architecture must go hand in hand. Those architects who were also scientists would admit that they owed much to the study of the bodies and structure of animals, and the structure of shells and crystals. He thanked the Institute for the manner in which the toast had been honoured.

**Captain Watson** (Royal Historical Society) said that whilst his Society did nothing in the way of producing buildings, they had a great deal to do in digging out the memories of ancient buildings, and also some of the architects of years gone by. It had often struck him that architects of the present day had done nothing to honour the architects of the past. One who had done a great deal in the past was Francis Howard Greenwell, but Greenwell had not done so much architecture as he was generally given credit for. Greenwell was given credit for being the architect of all the original churches, but Captain Watson could credit him with one church. One never heard anything of the architects of those splendid mansions of the early 1820's. "Carrara," at Rose Bay, and the home of the Cox's at Mulgoa, were splendid specimens of these mansions, but one never heard anything about the architect. One of the most extraordinary things connected with Australian history was the fact that Governor Phillip was sent to found Sydney, but did not have with him a single man who knew anything about building. The first house was put up by the soldiers and men who came with Governor Phillip. He was really the first architect in Australia. Whilst Governor Macquarie was certainly a wonderful man, Governor Phillip was more wonderful. Captain Watson concluded with thanks for the privilege extended to him of responding on behalf of the Historical Society.

**Mr. Cambage** (Royal Society) said, in thanking the Institute for the manner in which the toast had been received, that it was in a knowledge of timbers that the Institute of Architects touched closely upon the scientific side. Architects should call to their aid the organic chemist to discuss the behaviour of the timbers of this country; the inorganic chemist to watch the behaviour of steel; whilst the engineer and

the surveyor, and a host of kindred societies came in contact with the profession. No country could achieve a full measure of success until its people realised that they must assimilate science in their every-day life. Mr. Cambage conveyed the greetings of the Royal Society, and their very best wishes that the Institute might continue in its fine work of blending art and science.

**Professor Wilkinson** (Chair of Architecture), who was specially asked to speak, said he was very pleased to have the opportunity of thanking those present for the way in which they had assisted him in what they would agree was the somewhat difficult task of founding a new school in the Commonwealth. It had been a very great pleasure to be associated with the Institute since he had been here. It was yet too early to speak of results, because they all knew an architect could not be made in five years, or perhaps in ten, but they hoped that when they could look back for perhaps fifty years they might see a very continued improvement going on, an improvement which had already made a very fair start.

#### Toast: "The Press."

**Mr. Kent:** I am sure you will bear with me whilst I propose the last toast of the evening. I wonder how we should all feel if to-morrow morning we woke up to find the Press had struck and there was no newspaper! I think if you will just ponder over that for a moment you will realise the importance of the Press. I am growing to be an old man, and my intelligent interest in the Press dates back a very long way. I shall have reached three-score years and ten in two or three months, and I can look back intelligently for sixty years. In those early days of the Press we had two important organs—the *Sydney Morning Herald* and the *Empire*. At that time, the *Sydney Morning Herald* had not very long come into the proprietorship of one of nature's noblemen, the late John Fairfax. I do not think any of you realise how much the high character that has since continued throughout the Press of N.S.W. and Australia, but especially of Sydney, is due to the high character of the man who first nurtured that Press for us. Associated with him was a very clever and humorous man, John West. On the *Empire* I think the leading writer at that time was the late Dr. Lang; and very many tiffs took place between John West and Dr. Lang. I am sure you will realise, when you look back over the whole course of the history of our Press, that we owe a great deal to that high sense of fairness which has characterised their work. They have not belonged to one class or one section, but have faithfully and truly and impartially tried to express the opinions of all. Recently, in proposing a vote of thanks to Sir Walter

Davidson, I said I thought the memory he would leave behind him would be the memory that he had not kept to one class or section, but that he belonged to all and could be claimed by all. I think the same might be said of the Press. I think, so far as fairplay is concerned, our Press in Sydney will bear comparison with any other city in the British Dominions, and that means it will bear comparison with any Press in the world, for the British Press is the fairest Press in the world. We have seen the *Herald* grow from a small thing into a huge concern, and in later years we saw the *Telegraph* suddenly rise like a full-grown man. Then we have our evening press. The *Empire*, in the hands of the Bennetts, became the *Evening News* later on. I am not going to say quite the same things of our evening papers that I do of the morning papers; I could wish at times that our evening Press was a little more restrained in the reports of some of the things that are going on; but I suppose they want to sell the papers, and they are doing it. But I will say of our morning papers, that they are not thinking, in my opinion, first of their sales, but of the public and the high mission they have in their work. I am sure you will all join with me in wishing success to the Press, and will cordially agree with all that I have said in reference to our Press.

**Mr. Geoffrey Fairfax:** I feel it very difficult to speak of the way in which my old friend, Mr. Kent, has proposed the toast. I do not know that we deserve all he has said, but I think we have tried to deserve it. This evening I have been talking with Mr. Lister Lister and Captain Watson about old days, and the toast reminds me rather of old days. When I first became a member of the Press it was the custom to propose the Press at all banquets, and, as a rule, as to-night, the toast came on rather late. Mr. Farmer White has had to go and look after his paper, which reminds me, that when the Rev. William Curnow was editor of the *Herald*, on several occasions when the hour was getting late, he turned to me and said: "I must go and look after the paper. You must reply to this toast." I feel very honoured that you have treated the toast as you have done. I think there is a great deal in common between architects and the Press. Both are working for the same good cause of uplifting the country; you try to build fine buildings and beautiful houses; we, I hope, try to train our citizens to be worthy of living in them. I can only conclude by saying: Let us carry on the good work; let you build the beautiful houses, and let the Press try and train the citizens to be worthy of living in those houses.

**Mr. Smith** (Director of Education) proposed the toast of "The Chairman," to which General Rosenthal briefly responded.



# THE FEDERAL COUNCIL OF THE AUSTRALIAN INSTITUTES OF ARCHITECTS 1923 MEETING

Held at the Rooms of the Institute of Architects of N.S.W.

(Continued from May Issue).

**Third Day: Monday, 12th February, 1923, at 10 a.m.**

All delegates were present.

**President:** We will now take the suggestion made by the W.A. Institute with regard to the scale of charges. The matter was touched upon on Friday and left over for further consideration, so I think we might take the whole discussion on Nos. 2 and 7 together. The question is, whether W.A. will agree with the code of charges, and I understand some suggestions will be made from other gentlemen with regard to arranging a basis satisfactory to everybody.

**Mr. Henderson:** Might I make a suggestion that before we discuss the scale of charges we have the briefest possible report from each State so that we can have the whole of the reports together as to what action has been taken with regard to the scale of charges, and have it recorded. Then that will be the basis of our discussion.

**President:** Certainly; then I would ask W.A. to lead the way.

**Mr. Kenwood:** In that case I would like to read the letter from the Secretary of the Institute in W.A., dated 20th January, 1923. (Letter read.)

**President:** The news from W.A. is that they have not even adopted the Federal Council charges, they having adopted the six per cent. basis, obtaining one per cent. from the builder in the old-fashioned way, and, shortly, they say they intend to maintain their old position as stated in the letter. That I regard as very unfortunate, and I still regard it as unfortunate—correct me if I am wrong—that it has been mentioned both by South Australia as well as West Australia that these speculative builders get young draftsmen or draftsmen who have to catch on by every straw, to make plans for them and charge a nominal fee. Supposing the fee were six per cent. instead of five per cent., would it make any practical difference? Does a speculative builder ever come to you and pay you even five per cent.?

**Mr. Henderson:** It is not six per cent. instead of five per cent., but six per cent. instead of five per cent. and one per cent. in West Australia.

**Mr. Kenwood:** The amounts are equal; there is only a different manner of receiving it.

**Mr. Masters:** Conditions are much the same in all the States except that in Queensland they only get five per cent.

**Mr. Hudson:** As a matter of fact, it is not quite the same, though it is nearly the same. It is different in this way, that supposing there is a £20,000 job, the architect gets one per cent. on the £20,000, that is £200, and then he gets five per cent. on that £200 again, which is included in the price.

**Mr. Henderson:** It saves the client money to charge him six per cent. straight out.

**President:** I see; first of all, it is added to the price of the contract and then the client pays the price of the contract plus that.

**Mr. Henderson:** That was the strongest argument we used in Victoria with the public to wipe it out.

**Mr. Waterhouse:** Is it secured in exactly the same way in W.A.?

**Mr. Kenwood:** The builder pays one per cent. and the client five per cent.

**Mr. Henderson:** If W.A. would go for the 6 per cent. and show the public that in big jobs they were considerably reducing the fee, it would be easy.

**Mr. Waterhouse:** The duty of this Council, surely, is to point out to West Australia what has occurred in Victoria, putting forth all the argument we can against such a practice and asking them to reconsider it, because it is one of the things we can hardly allow to pass. Whatever the discussion is with regard to the scale of charges this is a separate matter which we ought to take and point out, because it is entirely contrary to the aims of this Council.

**President:** Have you anything further to say with regard to W.A.?

**Mr. Sydney Jones:** No, I think that absolutely clears the ground, and I am sure if the case is put before them they, as sensible men, will accept it. A great deal of the work over there is small work.

**Mr. Kenwood:** I think if you leave it to us it will be made clear; it is an overlapping that is quite lost sight of.

**Mr. Waterhouse:** And it could be pointed out how seriously non-adherence by other States would jeopardise the unity of the Federal Council.

**Mr. Laybourne-Smith:** That is a point W.A. does not appear to realise. I have always felt that W.A. could never have read the Constitution of the Federal Council or they would never have behaved as they have done. The Constitution requires them to appoint two delegates of their own Institute. We know that two gentlemen act for them because they cannot send delegates here, but I am afraid that they do not even notify us of the appointment of the delegates. Then, they must remember, that our decisions are binding on them. This is the first time they have told us that they have not agreed to the charges; in fact, some of the architects from over there think that they have agreed because it is only a few weeks since an architect from W.A. called on me and said how glad he was that the alteration had been agreed to, and that they were now collecting the six per cent. from the client instead of five per cent. and one per cent. from the builder. South Australia has adopted the Federal scale.

**Mr. Henderson:** Victoria has adopted the Federal scale *holus bolus*.

**Mr. Masters:** Tasmania has done the same from the beginning of this year.

**President:** As regards N.S.W., you know the position. I think if three States have adopted one scale of charges it is up to the others to get into line.

**Mr. Sydney Jones:** The three which have adopted it are the larger States. We must bear in mind that possibly the smaller States feel that they have some little advantage by having some small licence in regard to the fees and charges. Still, we will do our best to bring W.A. into line.

**Mr. Henderson:** As far as Queensland is concerned, although I would not have you think that I am in any way accredited to speak for them, I understand from my interview with the President of the Queensland Institute that they are still adhering to the practice of charging five per cent. direct to the client and making no charge to the builder.

**President:** You have heard the reports of the various States. I would welcome any suggestion now for bringing us all together.

**Mr. Rutt:** I think in the first place we ought to clearly understand that whatever we do is binding on all the members of this Federal Council. Unless we do that, it is simply beating the air to no effect.

**Mr. Waterhouse:** On that point I would like to mention something which our President could hardly mention, but when we were discussing the fees in our Institute some time ago and that resolution which I read to you the other day was passed, prior to that he pointed out very emphatically that what the Federal Council carried out was to be approved and to be carried

into operation by the State Institute, otherwise it was tantamount to adopting the position of having to secede from the Federal Council. That to be consistent we must adopt the scale or any other business that this Council decided upon.

**Mr. Rutt:** That is approved by a majority of the States.

**Mr. Waterhouse:** Exactly. So that I can assure you that we shall do what we can to work on those lines.

**Mr. Henderson:** I have given this matter considerable thought and it seems to me there are two points of view from which we have to look at it. The first point is, as the suggestion comes from N.S.W., that the Federal Council should adopt the N.S.W. scale, to which they have given considerable thought, and we should decide whether we as a Federal Council reckon, first of all, it is expedient to make that adoption. Secondly, I think we might spend a little time in considering which scale of charges, either the Federal scale or the N.S.W. scale, is the better drafted and the better prepared scale.

So far as making the change is concerned, sweeping away our Federal scale of charges, and adopting the N.S.W. scale, I am opposed to that, for this reason: One of the objects of the Federal Council in its constitution is to bring about uniformity of Australian practice. We have just heard reports from the various States, and we realise that four out of six States practically have uniformity; that is, N.S.W., Victoria, Tasmania and South Australia. Practically, so far as the main consideration goes, we work on the same lines. W.A. charges practically the same total fee, but makes the charge in a different way. Queensland is behind us all.

As we have not succeeded in getting uniformity in the six States, I think it would be a mistaken policy for us to go a step farther and adopt a scale such as N.S.W. has prepared, which gives the architect in certain cases higher fees, when we have not got uniformity on the scale that the Federal Council has already put out. That is why I think, putting aside the difficulties which States might get into by issuing a new scale so soon after the Federal scale has been issued, we should not be wise in adopting the N.S.W. scale. We have not got uniformity, so why issue something which would make the difficulty of arriving at uniformity greater?

On the second point, as to which is the most desirable scale, from the point of view of the general lay-out of the scale and the protection the scale affords the architect, to my mind there is no question at all—I think that the N.S.W. lay-out and verbiage is preferable to the Federal. What I have done in order to



satisfy myself on that, is to cut up two scales and put the corresponding clauses side by side. There are certain matters in the N.S.W. scale which are not in the Federal scale at all and which I think it would be desirable to have. There are a few matters in the Federal scale which are not in the N.S.W. scale and which I think it would be desirable to have. But even with the opinion I have formed on a comparison of the Federal with the N.S.W. scale, I do not think for the time being it is desirable for the Federal Council to adopt the N.S.W. scale, for the reason I have given—that is, the reason of our desire for uniformity. But because N.S.W. has, in my opinion, got something better than the Federal scale has got from the point of view of protection of its members, I do not see why N.S.W. should be debarred from using that. With that object in view, I have framed certain motions which I propose to read. I have given those motions to my co-delegate from Victoria, but I have not even asked him to second them. If those motions appeal to members I think they might settle the matter for the next few years.

In considering those motions, I want you to bear in mind the fact that Australia is as big a country as America, and it is a country which is not developed one tithe of the extent America is developed, and for us—with all the practices varying in the different States from Geraldton, in W.A., to Cairns in Northern Queensland—to try to get all over Australia an absolute uniformity in regard to the charges when the state of the profession and the status of the profession is in no way uniform round the coastline of Australia (in the bigger States unquestionably the profession has a higher status and there is no question that the architect does more for his money), is not, I think, possible at the present time. With that idea in view I am going to move:

- (1) That the N.S.W. proposal that their scale be adopted by the Federal Council be not approved.
- (2) That in view of the fact that the scale of professional charges of the Federal Council of the Australian Institutes of Architects as adopted and as amended in February, 1922, is the uniform minimum scale desirable, Western Australia and Queensland be strongly urged to adopt the same during the 1923 period.

In connection with that motion I hope that during the 1923 period some member of this Federal Council who is *au fait* with this whole matter will be able to visit Western Australia and some member will be able to visit Queensland, and during this period we endeavour to lift Queensland and Western Australia to that

uniformity which the Institutes have adopted. The third section of my motion is:

- (3) That any State desiring to amplify the verbiage for the better protection of its members, or alter and raise to a small degree the charges above the minimum laid down in the Federal scale for any domestic reason peculiar to that State, shall submit to the Federal Council its proposed scale of charges showing such amplification and alterations, for the approval of the Federal Council.

I put that in in order that any State which wishes to go beyond the Federal Council's minimum shall in doing so acknowledge the sovereignty of the Federal Council in the matter. I think that is unquestionably what should be done. The sovereignty of the Federal Council in this matter should be acknowledged, and any State desiring to go beyond what is expressed as the minimum in the Federal scale should do so with the concurrence of the Federal Council, and it also would be of value in that it would give the Federal Council and the State submitting any alteration they desired to make, an opportunity of having a record with the Federal Council of such alteration, pending the time when it would be possible to make a uniform scale throughout. I would now like to move what I have read as one motion. In regard to the third portion of the motion, I would say that if these motions are passed, I would be perfectly willing that the N.S.W. scale should be put up to this Council before it adjourns so that the Council may approve of it.

**Mr. Laybourne-Smith:** I think we must congratulate Mr. Henderson upon the work he has put into this matter. I had gone so far as to compare the two scales, and the Federal Council can take no exception whatever to what the N.S.W. Institute has suggested, because it means a slight increase and no deduction in any particular charge. As to W.A., it is collecting the same amount of money as we in our State, only doing it in a way that we do not think is desirable. I can support Mr. Henderson that the Federal scale of charges be taken as a minimum requirement in any State, and the proper method of collection; but if the internal machinery of a particular State makes it desirable to charge a greater fee and to set out the manner of charging it in different verbiage, the Federal Council would raise no objection providing it is approved by the Federal Council first. So I would like the privilege of seconding the motion Mr. Henderson has put forward.

**Mr. Masters:** I would like to support the motion; I think it would get over the difficulty very well.

**Mr. Waterhouse:** I would like to say that I think what Mr. Henderson has suggested seems to overcome

a very great difficulty; that is, that we have a scale of charges which we gather from the temper of our members is one that they are going to retain. Mr. Henderson's suggestion leaves it entirely so that the N.S.W. Institute can maintain its scale and can from time to time alter it. It had occurred to me we might possibly find it later not necessary to wait for the other States to make certain suggestions which they would out of their daily experience find expedient, but if we in considering the charges at various times find it possible to make suggestions to the various States to amplify their charges I think we ought to do so. We shall, I take it, from time to time report on the working of a particular code, and no doubt out of the working of the codes in the various States we shall ultimately collect a lot of valuable information which will enable us to come to a better decision when any specific request is sent in by a State for an alteration of the charges. As to the broad principle suggested by Mr. Henderson, I think it is admirable, and I think, too, it is introducing that elasticity which was previously mentioned and which I think is very desirable. It removes, too, the feeling that we as a Federal Council are anxious to impose a set of conditions on every State irrespective of the local conditions governing it. I would like to support the motion, it seems to me to clear away all the difficulties we have in regard to the matter.

**Mr. Rutt:** I do not think it was ever anticipated that charges should not be in excess of the scale laid down by the Federal Council. As Mr. Henderson has pointed out, the six per cent. is very clearly indicated as a minimum charge. The mode of collection is an important matter of principle which was very strongly advocated very early in the deliberations of the Council, and now, after a good deal of discussion and trouble, the States have adopted the abolition of the collection of the one per cent. from the builders, with, I think, admirable results. I do not think we ought to drop that, and I think that should be imposed—I say imposed because I think we have the right to impose it upon the other States according to our Constitution.

It is possible I will be going to W.A. about Easter time, and if I get an opportunity I will get into touch with the men over there and try to put it to them, if you like to give me the authority to do it.

There is one part of the scale of professional charges as set out in the N.S.W. scale which I think this Council could very well adopt, and that is the first five sub-clauses relative to conditions of engagement, which I think are most admirable and will give the architect much more security than he has under present conditions. I am quite prepared to move later when this other matter is dealt with, if you think fit, that

this Council adopt those first few clauses, down to (h).

**Mr. Henderson:** Could we dispose of my treble-barrelled motion first?

**President:** Yes, certainly. I would like to say now that I feel sure that this Council is deeply indebted to Mr. Henderson for the trouble he has taken in framing what appears to me a very wise solution of what otherwise might have led to great difficulty. But knowing his capabilities with regard to matters of this kind one is not surprised when it comes from him. I feel sure that this will afford relief of mind and a great deal of unnecessary discussion—perhaps unwise discussion—later in the Institutes, and we shall feel that we have done a great deal of good without creating trouble during the process. The matter will be brought before our Institute at an early date, and I am glad Mr. Henderson suggested in his motion that the Council, being the sovereign power, N.S.W. should submit to the Council and other States should submit to the Council any variation they may wish to have in connection with their scale of charges. I shall now put the motion as proposed by Mr. Henderson and seconded by Mr. Laybourne-Smith.

Motion carried unanimously.

**Mr. Hudson:** Before you proceed with the business paper, might I suggest that before we consider alterations to the Federal scale of charges, that we decide for the present the Federal charges be altered in no way and that any suggestion such as Mr. Rutt has put forward—and I entirely agree with Mr. Rutt that the addition of those sub-clauses would be of very great advantage—be advanced from the various States. I take it that now Mr. Henderson's motions have been passed there will be no doubt, as in the case of N.S.W., that our own domestic affairs will be covered by our own local scale of charges and I would suggest that any alterations for the present and for some years to come be embodied more in the local State charges than by altering the Federal Council's scale.

**Mr. Rutt:** I am not proposing to alter the Federal Council's charges at all.

(To be continued)

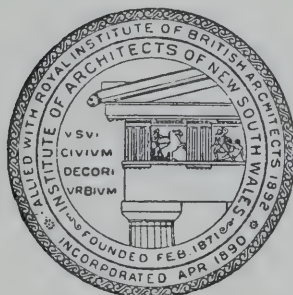
## COMPETITIONS

COMPETITION.	CLOSING DATE.	REMARKS.
N. S. War Memorial ...	—	Approved.
Victorian National Memorial	30/6/23	Approved



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



JULY 16TH  
1923

VOL 12. No. 7

PRICE ONE SHILLING

# LIGHT AND RENDERING

## LECTURETTE

By Norman Carter, 12/6/'23.

When the French Impressionists first came into prominence and began their war upon worn-out conventions their battle-cry was "Light."

"Light," they said, "was the principal person in the picture." Ridiculed as they were at the time, persecuted and starved, many years of practice and experiment have justified their contentions.

It may be said with equal truth, that light is the principal material which an architect uses. He builds with a number of different materials applied to different uses, stone, brick, concrete, plaster, wood, and he treats them in numberless ways. They are judged as a whole, as a complete and final result by their appearance as revealed by light.

A blind man can, through the sense of touch, gain a certain knowledge of the local fact, by passing his hand over various substances he may arrive at a general idea of their nature and also understand in a very limited way their forms, but he knows nothing of the beauty which can only be gained by sight. He is robbed of the deep pleasure of receiving impressions of a complete harmony of proportion, form, and colour revealed by light.

Incidentally he is spared much mental anguish suffered by those whose senses are intact.

It is not a fantastic statement or a poetic imagining to say that the principal material which an architect uses is light.

"How will it look?" is the question always put when discussing a design or the materials to be used in the carrying-out of a design. It is the final test and in reality we are asking, "What will light reveal? what effect will be produced?"

On general principles the work of an architect does not differ from that of a sculptor. If there is a difference it lies in the fact that an architect has a greater number and variety of materials to deal with than a sculptor. Both must consider the silhouette, the mass appearance from various points of view; both model forms, round, half-round, flat, cubic, etc., both must consider textures; and all the while both are using light.

A cornice is constructed. Light is caught and a shadow cast, a band of tone is created, a valuable thing in design. A window or door is made, clean cut strips of tone appear, a sense of solidity is created.

Pillars, with their variety and subtlety of tone and edge, direct light, half-tone, full shadow and reflected

light. You are simply using light as a very tangible though elusive material for producing effects upon the minds of others.

You literally have the power to control the movements of the eye of the spectator. You draw it across a placid and simplified surface to linger with interest on an enrichment; you can excite or soothe, you can please or disgust, attract or repel; and it is by light that you do it. Surfaces chafed and blistered by ceaseless modelling will tire and ultimately repel the eye. Over-simplification will leave it hungry. Something we call "taste" is required. It is a vague term with a very definite meaning. Why is it called "taste"? The interest must be kept alive, responsive, as in a good dinner. Neither surfeited nor starved. The judicious treatment of various means, held together in a united rhythmic whole.

Jazz noise—I will not say music—while having a certain sense of rhythm, is a maddening monotony of sound. The brain is surfeited. Jazz is not confined to music. For a visual jazz, take an after-dinner stroll in Sydney. What a mighty thing is light. What heavy responsibility rests upon all who use it. What about colour? White, yellow, red, blue, are but arbitrary terms. Under manifold conditions of light they appear modified or intensified, warmed or cooled. Juxtaposition produces different results. Injudicious use of colour can entirely disorganise an otherwise fine architectural conception. It is possible to alter all sense of weight by an arrangement of colour. A block of stone may turn the scale at so many hundred-weight, and a building may be composed of thousands of tons weight of stone, but it does not necessarily follow that it will look like that weight. It depends upon the tone and colour used, as well as the tones of light and shade produced by the architectural features employed.

I think it was Napoleon who said when he first saw Antwerp Cathedral that it was like a piece of Brussels lace. The exquisite treatment of modelled surfaces of stone had conveyed to his senses a feeling of lightness of something fragile. Think of it: You can juggle with tons of material by means of colour and tone.

How many of us would have the temerity to appear in a suit of clothes coloured in such a manner that all sense of the form of the figure was lost. It would be useless to argue with our critics that the suit was



made by the best tailor, that the material would last for years, that it was a perfect cut, and so on. If it *looked* wrong and made us ridiculous, we would not wear it.

What a valuable thing camouflage was in the Great War: Here was an elaborate system conceived and developed with the one object of deception. On land and sea, solid matter, buildings, battle-ships, etc., were made to disappear or take on a deceptive appearance. How was it done? Simply by paint of various tones and colours and shapes. How many lives were saved by an ingenious coat of paint! Paint the side of a ship vermilion and twelve-inch armour plating became poor protection.

This may help us to understand a little more clearly the inestimable importance of surface appearance. Light is the acid test.

While you may say that too much thought cannot be given to durability of material, weights and strains and all the chemistry and mechanics of building, it may also be said that too little thought can be given to consideration of the effect when complete.

Suppose that a building does conform to all conditions laid down in specification, that it survives all conditions of weather, resists all manner of secret processes of decay: what profit is there if it *looks* wrong?

It may be a very sound financial investment, but is that the only thing worth while? Much care is expended upon the details of a contract, quality of materials, methods to be used in employing them. All this is expected of an architect worthy of the name.

It is the equivalent to technique in painting. Sound technique is expected of a painter.

There is a book entitled *Art and Common Sense* in which the author deals with this point. He says that technique in painting is the equivalent of ordinary decency in life. It is what is expected of one. We do not walk down the street drawing attention to the fact that we have washed and shaved.

Surely when the mechanics of architectural training have been mastered, or rather while they are being mastered, the aesthetic side should be considered of equal importance.

But are the points that I am stressing purely aesthetic? Is there any part of an architects' training that is not practical? The one thing that forms the basis of such study is the intense cultivation of the faculty of observation. The artistic sense, or natural taste, is useless if the mind has not been stored with natural facts and phenomena; they are the food upon which the artistic sense feeds.

To have the mind trained only in the making of

plans and elevations and then left without a very definite knowledge of the action produced by light under manifold conditions is to be only half-baked; without this special knowledge a conception on paper may lead to anything but a satisfactory result, when submitted to the severe test of light.

I have seen perspectives rendered with a great deal of charm. The buildings they were meant to represent did not appear as suggested on paper. Was it deliberate, or was the limitation of training discovered? Was knowledge of the action of light on surfaces at fault?

From actual experience I have had the greatest difficulty in making architectural students realise the absolute necessity of training the observation. This should be impressed upon them by the architects to whom they are articulated. The most extraordinary results have been produced by some advanced students which proved unerringly that they have been chained like galley-slaves to rule, compass, and square, producing all that was expected of them most conscientiously; but when required to suggest the appearance of reality of a building in sunlight in a landscape setting they were hopelessly at fault; and most irritating of all when asked for a reason for this or that method or tone or colour to have the answer hurled at one: "Oh, have you not seen So-and-so's perspectives?" They have swallowed a whole bagful of questionable tricks, in lieu of a few honest first-hand observations, and thought they had discovered the secret of sound work. How simple, how delightful it would be if the apex of art in any medium could be reached by a guessing competition. What a fine time we could have if the height of our ambition were merely to copy the tricks of others. No sleepless nights after days of honest failure; no sizzling on the gridiron of mental endeavour. Just the happy care-free existence of a ne'er-do-well, a pickpocket by sleight-of-hand taking that which belongs to another.

I hold that to render an architectural drawing as it should be done presupposes a long period of exacting study of the facts of nature, especially the manifold actions of light.

What is the object of rendering a drawing in semi-pictorial form? Surely the first and last consideration should be to impress the client with a truthful appearance of the completed building, however artistic the means employed. But is this always done? The fascination of trying to gain a reputation for being artistic and clever overpowers too many.

Let us give full rein to such artistic qualities we may possess, but not at the expense of fundamental truths. To this some may say, "May not a sky be lowered in tone for the sake of effect or a warm wash

run over a drawing for the same reason? By all means. Does not nature do it? We have to be pretty wide awake to improve upon nature. Not long ago I saw an effect in which the sky was heavy in tone with dull grey clouds. The buildings seen against this were in a strong warm light of a late afternoon sun. It would have been difficult to exaggerate the brilliance. Though it was what we call a "forced effect," still it was natural. It happened. Adapted it would have made a splendid theme for rendering. But one thing was never lost: The buildings looked like buildings and the nature of the materials used was not obliterated. Wood looked like wood, and stone like stone.

I do not see the necessity for forcing the sky down to a dead black, then washing the building over with a thin film of yellow, its tone so graduated that the perpendicular lines appeared all awry. The whole effect producing anything but an appearance of truth. The sky-like soot, the stonework as fragile and transparent as glass and the whole building appearing like an inverted obelisk, rocking on its foundations. Such is the power of a few washes of watercolour improperly handled. Such methods may be clever—they are—for it takes quite a little cleverness to tell a fantastic lie in such a way that the unwary will swallow it. What is the idea of doing such work? Does it spring from a consuming desire for notoriety?

If so, why not walk down the street on one's hands? It reverses the natural order and would certainly attract attention.

There are so many beautiful things to be studied in nature. Her storehouse can never be exhausted. It is hard work to gather her truths. It is equally hard work to learn by experiment to apply them to the requirements of rendering. But is it not all worth while?

Acrobatic clowns in a circus are fascinating people. They do all sorts of queer things, and we willingly part with a few shillings to see them perform. But imagine earning your living by tying the body in knots; by reversing every natural movement of the body, and smiling at the audience through your legs. All very well for the sawdust ring, but it has no place in normal healthy life. Develop the body by every legitimate means so that the beauties of graceful movement may be seen or the intensity of athletic prowess—normal and unforced. So with the faculties: Cheap cleverness in any art reaches no higher than the three-card trick. Its one object is to deceive and not to demonstrate.

Light was the first thing created.

Too often it is the last thing to claim our attention. If we persist in ignoring the miracles wrought by the

manifold action of light, the result will be that our work will reveal that condition of the universe before the creation of light, it will be "without form and void."

It is not out of caprice or from that mental condition resulting from a disordered liver that I speak as I do of this all important question.

Nor is it with the presumptuous idea of teaching my betters. There is an overwhelming evidence both in schools and with those in professional practice, painters and architects alike, that little thought is given to the problem of light.

I would alter the name of schools, popularly known as "Art Schools" to that of "Observatoriums." It is observation, or the true understanding of that which is flashed through the eye to the brain that is the foundation of the whole matter.

Painters are supposed to be observers; they should be; but they are not always.

I know of painters who attempt architectural settings. There are pictures in which pillars have been rendered as if made of crinkled paper, pavements and floors heaving and rocking in apparently accidental dribbles of colour.

One does not object so much to the commonplace or the incapable so much as talent and ability allowing itself to be lead astray by a few pretty confections, the undermining of the mental constitution with artistic cocktails. Being afraid to sit down to a solid meal of plain, wholesome food that foreign names could not disguise, fearful of being thought ordinary.

Using means to save labour is an evil not confined to anyone of the artistic professions. Short cuts only lead into quagmires.

Small profits and quick returns may be a sound basis on which to build a thriving business, but it is a principle which never built a masterpiece in architecture or achieved one in painting.

Inspiration! I do not believe there is any such thing as generally understood.

There is an ancient saying—who will deny its truth?

"Labour is the price which the gods have set upon everything valuable."

## OBITUARY

We regret to announce the death of Mr. R. W. Pickering (Manson & Pickering), a valued member of the Institute and a brilliant architect, whose death at the early age of 44 is a calamity to the architectural profession in Australia.



## TECHNICAL COLLEGE

Artists and others interested in the art education of students will be pleased to note that an important appointment has recently been made to the Technical College of a sculptor and modeller.

The sculptor referred to is Mr. G. Rayner Hoff, who has been specially selected for this work on behalf of the Public Service Board by Sir George Frampton, R.A., and Mr. Derwent Wood, R.A.

Mr. Hoff, who is just 28 years of age, left London for Sydney in May to take up this important position.

medal with a larger relief. During this period he also studied life drawing and architecture and earned his living by working part time as a professional modeller on all kinds of architectural work, fibrous plaster, etc., and for some time had full charge of the art side of the chief firm in Nottingham, doing architectural modelling.

After the war he returned to Nottingham School where he spent six months in modelling and design. In 1920 he sent his first works to the Royal Academy,



1921.

DESIGN FOR A WELL-HEAD.



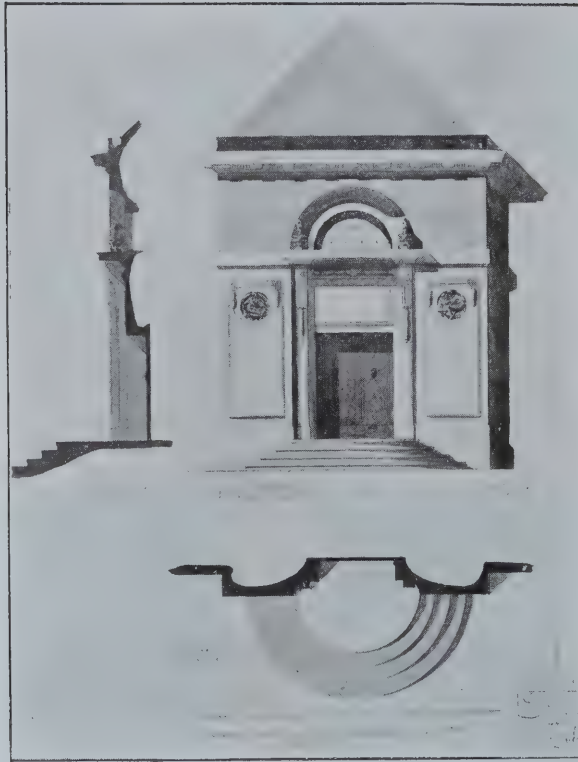
*G. Rayner Hoff.*

He has received very varied training in all branches of his profession. After leaving school he worked for several years on stone work, took a full course in architectural drawing, modelling, carving, masonry and matters incidental thereto.

He studied also at the Nottingham School of Art, geometrical, perspective, architectural and free hand drawing, also elementary modelling and design, after which term two of his reliefs and architectural drawings were sent to the National Competition, and gained a silver medal. The following year he won a gold

which were accepted and hung. The same year he transferred his studies to the School of Sculpture, Royal College of Art, and in the following year took his A.R.C.A. diploma in modelling and the prize for the best year's work.

Last year Mr. Hoff was successful in winning the Prix de Rome scholarship for sculpture, which is competed for by British born sculptors only, and is regarded as the blue ribbon distinction in sculpture in England.



SKETCH DESIGN FOR A SCHOOL ENTRANCE



HISTORY



GEOGRAPHY







"LIFE"

PANEL FOR THE FACADE OF A MAUSOLEUM

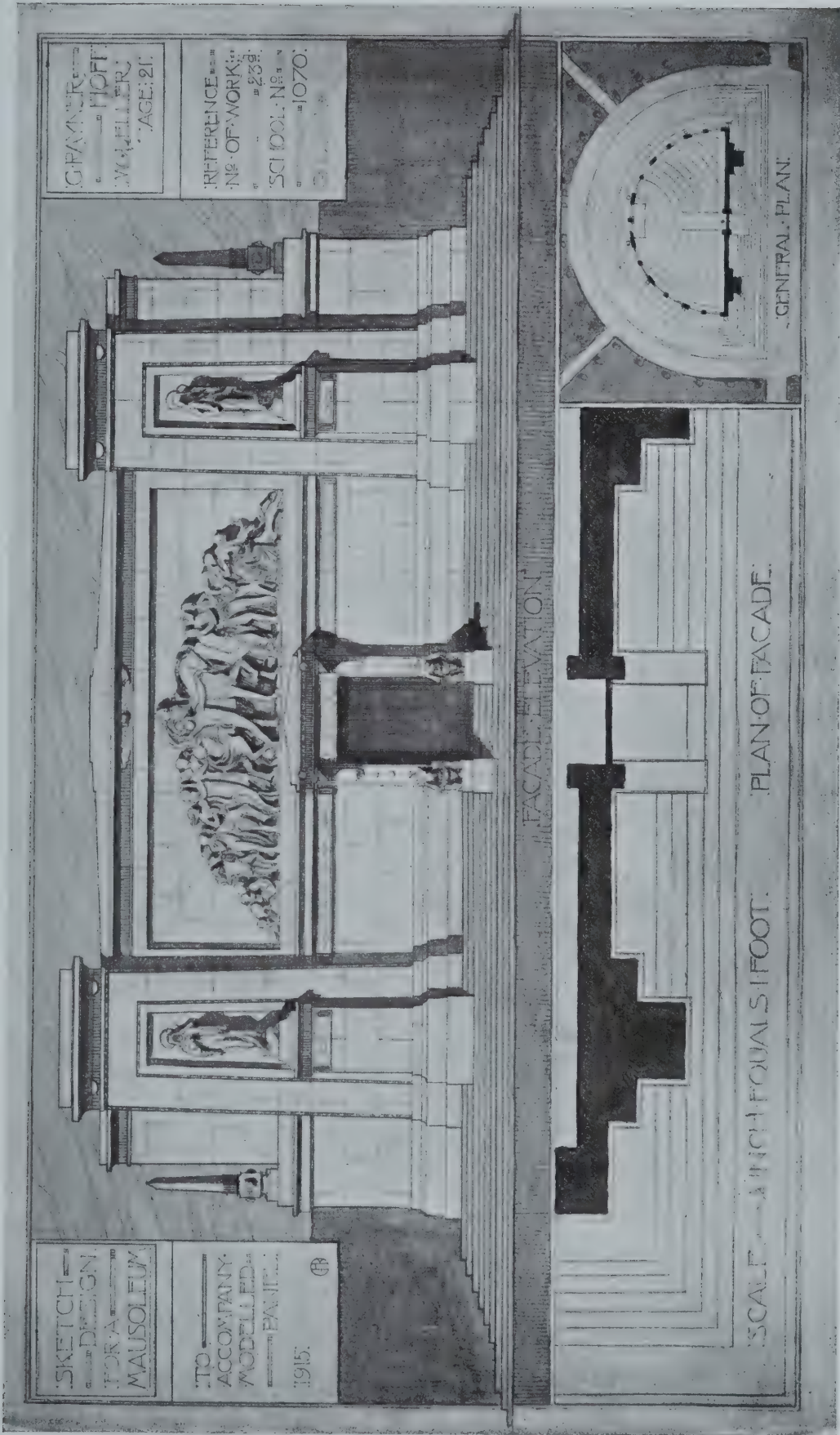












SKETCH DESIGN FOR A MAUSOLEUM





# THE FEDERAL COUNCIL OF THE AUSTRALIAN INSTITUTES OF ARCHITECTS 1923 MEETING

Held at the Rooms of the Institute of Architects of N.S.W.

(Third Day, Monday, February 12th, continued).

**Mr. Laybourne-Smith:** I want to oppose very strongly Mr. Hudson's suggestion. It has been settled right from the commencement of the Federal Council that the Federal Council is to originate the business for the decision of the States. If we let every State draft a clause, following Mr. Rutt's suggestion, then suppose every State drafts condition of engagement we have to go through each one of them, whereas if we submit to them draft conditions of engagement they will probably adopt them or may make some slight modifications, and we are much more likely to get unanimity. I might say that it is a special direction of the South Australian Institute—they have considered the matter of the conditions of engagement—that we should try to get the conditions of engagement added to the Federal scale of charges in the same way as the N.S.W. Institute has done.

**Mr. Rutt:** I am not proposing this as a part of the scale of professional charges—I do not wish to tamper with that in any shape or form, but what I wish to submit is that it be a recommendation from this Council to the various States that that portion of the scale of charges as submitted to this Conference by N.S.W. down to sub-section (h) be recommended for approval by the various States—not as an addition to the scale of charges but as a separate document.

**Mr. Laybourne-Smith:** It is the preamble.

**Mr. Rutt:** Very well, as a preamble.

**Mr. Henderson:** I think the best way to get at what you want would be for the Federal Council straight away, if it feels it should do so, to settle that clauses 16, 17 and 20 of the Federal Council's scale be deleted and that the conditions of engagement down to sub-section (h) of the N.S.W. scale be inserted. We only have three clauses in the Federal Council's scale which in any way correspond with those conditions of engagement—clauses 16, 17 and 20 of the Federal scale; we should delete those three clauses and substitute the preamble down to the end of sub-section (h).

**Mr. Rutt:** I would point out if you do that, you are altering our code of charges, which we do not want to do.

**Mr. Henderson:** We are not altering our code of charges, but only adding something to the conditions of engagement.

**Mr. Rutt:** You are altering the document which has been approved by the Council.

**Mr. Laybourne-Smith:** And which has been amended every year since the Federal Council started.

**Mr. Rutt:** My original recommendation was that we adopt the first five clauses and then we do not have to alter our Federal scale in any shape.

**The President:** In the first instance, conditions of engagement should not come after the amount of fees has been stated; condition of engagement should come first.

**Mr. Rutt:** I would rather not have the connection with the scale of charges at all. I would rather have it as a separate document down to sub-clause (e). That gets over the difficulty Mr. Henderson has raised, because (f), (g) and (h) are already incorporated in our scale of charges.

**Mr. Waterhouse:** I would like first of all to think that the principle of from time to time making amendments is adopted by this Council. If we did not do that I think it would get away from the opportunity from year to year of amending and improving our scale of charges. Should it not be part of our work to constantly improve and amend our code of charges? I hope Mr. Henderson's suggestion will be carried out. I think that will embody the whole of the vital alterations necessary, which will delete from the existing code of charges clauses which do not cover quite as well the sphere that is covered by the N.S.W. code of charges, and we avoid that overlapping which would be very dangerous, and also by this means we should be agreeing to the principle of amending as time goes on, and the amendments emanate from this Council as much as possible.

**Mr. Hudson:** I entirely agree with what Mr. Waterhouse has said in this matter. I agree also with Mr. Rutt in some respects, and I quite agree with Mr. Waterhouse that it is necessary and desirable that it should be recognised that this Council meets with as one of its objects the amending of the rates and regulations laid down by the Federal Council. But in Victoria and South Australia we have just communicated those charges to the public, and I think it would be highly inadvisable at the present time to send out an alteration. If the matter is passed by this Council at this

meeting, I think it would come into operation straight away as soon as the States have approved. That may be within a short time, and I think it should be held over for twelve months at least, unless it is introduced, as I have said, as a local condition approved by the Council. I think for us to send round a new document now and advertise that there is a change in the scale already, when we have only just sent out the new scale on the 1st January, would be most injudicious.

**President:** Do you ever send a thing out without saying it is new? Does it not come in this way? The discussion, say, is only at your Institute, there is no alteration in regard to our scale of charges in any shape or form, but, you say, "We find N.S.W. has gone one better in trying to raise the status of the men to be engaged, by putting the terms of his engagement before the fees that he is charging; therefore we have adopted a few clauses which are relative to this."

This may be altered every year—probably it will be altered or amended every year. As Mr. Waterhouse has said, there must be some amendments. The price of sugar goes up and down and no one says anything about it. Supposing the cost of work became considerably higher owing to the price of materials and labour, our fee might have to be less because we might be getting too much for the work done on a percentage of the cost. Therefore, under these conditions, seeing that the scale of charges must be subject to annual amendment, if necessary, could not this be done?

**Mr. Waterhouse:** I take it that it would be reported to the various State Institutes that the Federal Council had reviewed and re-drafted and altered certain clauses in the Federal scale. N.S.W. need not be mentioned at all.

**Mr. Henderson:** Mr. Rutt has made a proposal and I submitted with regard to that proposal what I thought was a better way of achieving Mr. Rutt's object, that is, by wiping out certain clauses in the Federal code and inserting certain clauses from the N.S.W. code. I do not want you to think that in making the suggestion I was in favour of doing anything. I am in favour of letting the Federal code stand exactly as it is for 12 months and I think we then would have a better chance of getting Queensland and W.A. in than if we interfered with the scale straight away.

**Mr. Kenwood:** The West is in accord with the conditions of engagement.

**Mr. Henderson:** Even so, I think we have made a big step forward to-day, and I am perfectly content to leave the Federal code as it is for 12 months. If it will be of any assistance to members, within the next month I will let them have in graphic form a comparison

of the two codes. But I would like the Federal code left for 12 months.

**Mr. Rutt:** I do not want to touch the Federal code at all.

**Mr. Laybourne-Smith:** You are reversing the way the business has been done by the Federal Council. Mr. Tomkins laid it down as a presidential statement that the Council's object was to originate the business for the approval of the States.

**Mr. Henderson:** Then you should have voted against my motion which we passed a while ago.

**Mr. Laybourne-Smith:** I wish you would move what you have thrown out as a suggestion, because I would gladly second your motion.

**Mr. Henderson:** I will oppose any alteration to the code at this meeting.

**Mr. Laybourne-Smith:** Another thing is if you wait like that you will have another and different set of officers by the next meeting, and you cannot go to the Institutes and back up what you have argued at your general meeting. If we can go from this meeting to our next general meeting with all these resolutions and get them carried, we consider we have done our duty, and next year looks after itself; but if you carry this business and then ask that it should come back in twelve months' time you will find another set of officers dealing with it, men with different ideas, perhaps.

**Mr. Rutt:** My motion has not been put into definite form and has not been seconded.

**President:** I was wondering what you wished to do about it.

**Mr. Rutt:** I will put my motion in definite form now. My motion is:

That the first clause under the heading Conditions of Engagement, together with sub-clause (a), with the deletion of the words following in the next line; sub-clauses (c), (d), and (e) be adopted by this Council and submitted for the approval of the State Institutes as a separate document.

Sub-clause (a) concerns architects' deputies and exonerates us from personal supervision in all cases. Sub-clause (b) we do not want because it is already in, or something similar; (c), (d) and (e) are all new matters.

**Mr. Hudson:** That is, none of these clauses are covered by 16, 17, and 20?

**Mr. Rutt:** I do not think so.

**Mr. Waterhouse:** Will you consider the suggestion of not putting them in a separate document but that they be sent to the States for consideration and, if thought fit, adoption? One feels it is desirable to



have only one document and any amendments that are made embodied within that document.

**President:** I am afraid I will have to declare the motion lapses for want of a seconder.

**Mr. Laybourne-Smith:** In order that we may have a discussion I will move:

That we adopt the conditions of engagement as set out in the document submitted by the N.S.W. Institute and omit from the scale of charges clauses 16, 17 and 20, which are already covered by the conditions.

**Mr. Waterhouse:** I will second that.

**Mr. Henderson:** Now that the resolution is proposed and seconded, the position to my mind is this: It is an infinitely more desirable thing to do than what Mr. Rutt proposed because N.S.W., I take it, before this meeting of the Federal Council closes, will under the motion passed a few minutes ago, ask for approval of its document—I hope it will and I will have much pleasure in moving that it be approved. If N.S.W. does get that document approved at this session of the Federal Council, and if at the same time the Federal Council sends out these Conditions of Engagement as its amendment of the scale of charges, there is no difference then at all—the Federal scale and the N.S.W. scale are one. But under Mr. Rutt's scheme they would not have been—there would have been still slight differences. But I am of opinion—it may be a fanciful objection on my part—that it will not be wise to send further amendments of the Federal Council's scale to W.A. and Queensland until we have got them as far as we hope to get them. At the present stage I think the thing would be much better left for twelve months, by which time we may have had further experience.

**Mr. Kenwood:** W.A. makes one or two alterations and suggestions for the scale of charges.

**Mr. Henderson:** But do they deal with the question of Conditions of Engagement?

**Mr. Kenwood:** No, they approve of the Conditions of Engagement entirely as set out by N.S.W. They say that the Conditions of Engagement are viewed with approval by their Institute and will be incorporated by them at the earliest opportunity.

**Mr. Henderson:** Then if only Queensland is left I would not oppose the motion.

**Mr. Waterhouse:** I would suggest that the very fact we are improving the Federal scale of charges is something which would make the States more readily accept that scale of charges. Now we have it that W.A. is prepared to adopt this.

**Mr. Hudson:** I would like to register at this meeting that I am against it. I have got to go back as one

of the delegates for Victoria and face the Victorian Council, and I am strongly in favour of keeping this matter over for twelve months. I think it can be carried out in my original suggestion in the same way as N.S.W., Mr. Henderson hopes, will put up their scale of charges for the approval of this meeting, and the same thing can be carried out by other States. The Institute in Victoria will strongly object to any alterations in the scale of charges in any shape or form being sent out this year. Our members have taken considerable time and gone to considerable trouble in circulating the charges which have only come into operation since the 1st of January, and I feel they will object to making any alteration at this early date. So I wish to register officially my own views in the matter, and I shall certainly state that when I go back to Victoria. For twelve months I am against it.

**Mr. Laybourne-Smith:** It is not as serious as Mr. Hudson thinks. I would point out to you that this scale which he states his Institute adopted from the 1st January last was adopted by this Council in October, 1920, so there is no reason why we should not pass the resolution now, and it will perhaps take another two years before the Victorian Institute deals with it.

The motion was put and carried.

**Mr. Henderson:** I am going to move that on our business sheet be added, in connection with the item Scale of Professional Charges:

(e) Request by N.S.W. for approval of its scale of professional charges for its own domestic use. I move that be added to the business sheet.

**Mr. Laybourne-Smith:** I second that. Motion carried.

**The President:** The next item are the suggestions 1 and 2 from Western Australia.

**Mr. Kenwood:** The suggestion made is that W.A. clause 16 is preferable to N.S.W. clauses 9 and 15.

**President:** Don't those suggestions now come under the heading "domestic use?"

**Mr. Rutt:** I think this is a reduced scale which we have not approved of yet.

**President:** They are referring to the N.S.W. scale, and that scale not having been adopted except for N.S.W. own domestic use, this suggestion therefore lapses.

With regard to registration of architects, I would mention that you will have an opportunity of discussing that matter this afternoon before the Board of Registration at 4 o'clock, when we are going to discuss what the qualifications of the various States will be for admission into their institutes and for their diplomas. If we can arrive at one common basis it will

give an architect the right of Interstate practice; therefore I think we can let these suggestions go at that, if you are satisfied. You see, the uniform standard of qualification will be adjusted this afternoon—we propose to ask other States what standard they are adopting as Fellows and Associates of their Institutes for the future and for practice generally, and what has been adopted by those States which have registration, and what is likely to be adopted, because we intend to suggest one uniform method of Interstate practice on certain qualifications. That would save a double discussion now which would not lead anywhere.

**Mr. Laybourne-Smith:** There is one other clause in this N.S.W. document which you have submitted to the Federal Council which is not dealt with at all in the Federal Council code of charges, and which some of us would like to see incorporated in the Federal charges. It is the clause dealing with the lessee plans. If you are agreeable, I would move that we recommend the adoption of clause 10.

**The President:** It not having been mentioned in the Federal Council scale, you say it is desirable to adopt that clause.

**Mr. Laybourne-Smith:** Yes, I will formally move: That clause 10 of the scale of professional charges of the Institute of N.S.W. be included in the Commonwealth scale of professional charges after clause 11 of that scale.

**Mr. Rutt:** I will formally second it.

**Mr. Henderson:** I would like to see it in, but I am not keen on seeing too many alterations and changes made this year, for the reason that we have not got Queensland up to scratch, and we hope W.A. will make the change this year. I am not going to vote against this being added, but I am not going to guarantee that Victoria will be very prompt in altering the scale. So long as that is understood I will vote for this motion.

**Mr. Hudson:** I shall also have much pleasure in supporting the motion if it is distinctly understood that Victoria is not expected to make any public change in the Federal scale of charges within the next twelve months.

**President:** Instead of putting it in the negative, would you put it that the Federal Council understands that the change will be made as soon as reasonably practicable by the States.

**Mr. Hudson:** I am agreeable to that.

**Mr. Masters:** I can support any reasonable amendments.

**The President:** Now we deal with the sub-clause (e) of No. 2—the N.S.W. suggestion.

**Mr. Hudson:** After having read the clauses of the N.S.W. scale through, your charges in places are a

slight increase on the Federal charges. I quite agree with Mr. Henderson that in very many cases they are an improvement on the Federal code of charges; therefore I have very much pleasure in moving:

That the N.S.W. scale of professional charges is approved by the Federal Council for domestic use in N.S.W.

**Mr. Rutt:** I second the motion.

Motion carried.

#### **Election of Office-bearers, 1923-24.**

**Mr. Henderson** moved, and Mr. Laybourne-Smith seconded:

That Mr. G. H. Godsell be the President for the ensuing twelve months.

Carried unanimously with acclamation.

**Mr. Laybourne-Smith** moved, and Mr. Rutt seconded:

That Mr. B. J. Waterhouse be the Honorary Secretary and Treasurer for the ensuing twelve months.

Carried unanimously with acclamation.

**Mr. Henderson** moved, and Mr. Masters seconded:

That the office of the Federal Council for the ensuing twelve months be situated at 5 Elizabeth Street, Sydney.

Carried.

**Mr. Henderson** moved, and Mr. Laybourne-Smith seconded:

That the banking account be as during the last twelve months.

Carried.

**Mr. Henderson** moved, and Mr. Laybourne-Smith seconded:

That the President and Secretary of the Federal Council be authorised to make what arrangements are most suitable to themselves with regard to the assistant secretaryship during the ensuing twelve months.

Carried.

**Mr. Laybourne-Smith** moved, and Mr. G. Sydney Jones seconded:

That the next annual meeting of the Federal Council be held at Melbourne.

Carried.

**Mr. Henderson:** I move:

That this Federal Council tender to its President, Secretary and Treasurer, and its Assistant Secretary, the very hearty thanks of the Council for the manner in which the affairs of the Federal Council have been conducted during the past twelve months.

I will take this opportunity very briefly of saying that we feel that the distinguished manner in which you, Mr. President, have led the N.S.W. Institute



during the last two years, and the distinction which has been accorded you by making you the first President of the Architects Registration Board of N.S.W. is only on a par with the distinguished manner in which you have represented the Federal Council during the past twelve months in its activities in public matters. I am sure that the thanks of every architect in Australia are due to you for the enormous amount of energy you have put into all these three spheres of work.

To our friend Mr. Waterhouse, the Secretary and Treasurer, we also tender our most sincere thanks. We know, sir, as you have said, Mr. Waterhouse has been your right-hand and a tower of strength to you and to the Federal Council. We are extremely grateful to Mr. Waterhouse for all he has done for the architects of Australia during the last twelve months.

To Mr. Lough, the Assistant Secretary, I would say that I think we have all had at some time in our career an opportunity of knowing what the Secretary's job is like, and I feel sure that we all feel that Mr. Lough has carried out his work in a distinguished fashion. We are all extremely grateful to him for what he has done for us during the last twelve months. I have very much pleasure in moving the motion.

**Mr. Laybourne-Smith:** I would just support Mr. Henderson's remarks and second the vote of thanks.

**Mr. Henderson:** It is supported by everyone, and I have much pleasure in putting the resolution.

Carried with acclamation.

**The President:** Gentlemen, on behalf of myself, I must say it is very difficult to find words adequate to express what one feels on this occasion. But I think the stunning part of it is that anyone should in his own profession and walk of life find one's greatest number of friends. It is then a proud moment for any man, because if the men who know one's failings, or should know one's failings best, take the kindest view of them and support one in the manner in which you gentlemen have supported me in the kind things you have said of me, then all I can say is, although I may be very black I might be blacker. I thank you sincerely, and I assure you all that I will do my utmost for you during the coming year. I trust we will have a little more luck than last year, and that it may be possible to make the Federal Government understand that our anxiety in approaching them is for the welfare of the community. It is not the filling of our own pockets, it is not for any personal gain to-day or to-morrow, but it is the subsequent uplifting of the country to which we have the honour to belong. I thank you, gentlemen.

**Mr. Waterhouse:** I would just like to thank you for your very cordial vote of thanks. I appreciate it very deeply as coming from co-delegates and from

brother architects. I feel they come from friends, and that gives me added pleasure.

**Mr. Lough** also replied.

#### **Suggestions by Western Australia.**

**Mr. Sydney Jones:** The Western Australian Institute suggests that the dates of the financial year and the election of office-bearers be made to coincide as between the Institutes of the several States. "Whilst our dates appear to us eminently convenient and fall in with the annual meeting of the Federal Council, besides corresponding with the practice of other Institutes as well as Universities and the Royal Institute of British Architects, we are prepared to fall into line with the wishes of other Institutes in this direction."

**Mr. Laybourne-Smith:** When the uniform model constitution was drafted by the Federal Council, we came to the conclusion that uniformity of date of annual meeting might not be possible, and we left blanks for the names of the months when the meetings were to be held and the officers elected and accounts balanced. We could never think of meeting in Adelaide in January or February because we might strike a heat wave, so we have to meet in the winter. I do not think it matters very much whether the financial year coincides with the Federal Council or not.

**President:** The only question which has cropped up in connection with that so far has been the question of the levy, and probably it was the question of collecting the levy which was in the mind of W.A. to some degree. From what Mr. Laybourne-Smith has said, it does appear to me that it would be impossible to make the date uniform.

**Mr. Kenwood:** That might apply so far as the Federal Council is concerned, but it should not be so difficult with regard to the States.

**President:** But Mr. Smith has explained the difficulty which existed with regard to the States.

**Mr. Laybourne-Smith:** I think it would be best to tell W.A. that the Articles of Association in the various States have now received the assent of the Supreme Courts and contain varying dates which cannot be altered without very great trouble. I will move that.

**Mr. Hudson:** I second it.

Carried.

**Mr. Laybourne-Smith:** I would like to suggest that each State Institute be asked to send a list of its members and their addresses to the Secretary of the Federal Council; that is, in order that circulars emanating from the Federal Council may be posted direct

to the members instead of through the State Secretaries. I move:

That each State Institute be asked to supply the Federal Council with a full list of members and their addresses.

**Mr. Masters:** I second the motion.

Carried.

**Mr. Hudson:** I do not know whether it is necessary to fix the date of the next meeting, which is to be held in Melbourne.

**President:** It is a little difficult to fix the date because it is not known exactly what will suit the various States until the Secretary writes to, inquire. We could say approximately the first week in February next, but that might not suit W.A. or South Australia; they might say "A week later," or "A week earlier we can manage." I hope that we can get Western Australia represented by its President in Melbourne. Will their delegates urge the Institute to do so?

**Mr. Kenwood:** We will.

**Mr. Henderson:** There are one or two other matters of Federal interest which I would like to mention. The first is the establishment of the nucleus of travelling scholarship funds by the various State interests. I think you will all agree with me that travel is essential in the education of an architect. We have in Victoria recently established a travelling scholarship fund. We have not up to date made any energetic effort to get money in, but in a very short time we collected £1,500, which is a very useful nucleus of a fund by which within five years we hope to have sufficient capital to send our most brilliant student abroad every year. The scholarship would be awarded by examination and the benefit not only to the student who wins the scholarship, but obviously a student who studies for the examination, works the harder. I was going to suggest that Mr. Hudson and myself as Victorian delegates should make a short explanation of what we have done in this matter in Victoria, which could be sent to you, sir, and forwarded to the other States with the idea of their endeavouring at some suitable date in the near future of taking similar action. If you have a fund, however small, you can make a start, and to it architects can contribute.

**President:** I think it is an excellent suggestion.

**Mr. Henderson:** The next matter is in regard to town planning. I think it is the duty of the architects of Australia to take the greatest interest in this matter. During the last session of our Parliament we had a Town Planning Commission for the metropolitan area appointed. They have certain funds put at their disposal to create a staff and take evidence and prepare

a comprehensive scheme for the development of Melbourne, our capital. I was going to suggest that I should forward sufficient copies of that Bill so that the Bill could be brought before each State Legislature by the architects of that State. It is a very short and useful measure, and if the personnel is right, we feel, as far as our metropolis is concerned, it is going to be of the greatest advantage. Such plan will be accompanied by a report from the Commission, stating the manner in which they suggest the improvements in the future will be carried out.

The only other matter I wish to touch upon, which I think is of Federal interest, is this: You are all aware that in every big city there are buildings which in case of fire are an absolute menace to the occupants. If those buildings remain untouched, it is very difficult for any controlling authority to do anything with them or to do anything to see that they are properly safeguarded. I think the first duty of everybody is to do what they can towards the preservation of human life, and in our State we recently passed a very short Bill dealing with this matter in our metropolitan area; the Bill to be dealt with by regulation by the City Council. I think it provides a very useful appeal board, so that the provisions of the Bill could never operate too harshly on a property owner. I was going to suggest that I should send you copies of that Bill and the regulations, so that you could distribute copies to the Institutes of Architects in the various States to see if they can get their Governments to take similar action.

I make reference to these matters because I feel that architects can be of the greatest use to the community and can raise the status of their profession generally by coming along with constructive suggestions to their State Governments in matters of architectural interest and endeavouring to assist their Governments in these matters. I would like it to be approved that we take that action.

**Mr. Waterhouse:** I would like to say how very much those suggestions of Mr. Henderson ought to be valued, particularly in regard to Nos. 1 and 3. If I may take one moment of the time of the Conference, I may point out that what he has suggested in regard to No. 2 is something that we are very strongly opposing here. We have found in the past that anything in the way of a Town Planning Bill or Act or Commission is a clog and delay on the very matter we are aiming at, so that we are fighting tooth and nail whenever it is suggested. But so that we should have some constructive policy to offer in opposition to it, we have recently formed the Sydney Regional Plan Conference, which aims at securing for Sydney ultimately a comprehensive plan for the whole of Greater



Sydney or what we now call the Metropolitan Area. To do that we feel first of all we must appeal to the citizens by propaganda and other means. We have first to induce them to believe that such a thing is desirable, and when we have the pressure of public opinion with us and have endorsed a plan, then we will approach the Government and ask for statutory power to enable us to bring about the fulfilment of the design set out in the plan. With that in view, last November we had probably the most representative gathering of citizens ever held in Sydney, presided over by the Lord Mayor, Mr. McElhone. The Governor was present, and many other prominent citizens, and we were successful in procuring £3,000 in actual cash and promises to enable us to proceed. We have a most active executive now at work forming various committees to deal with all sorts of questions, such as traffic, housing, finance, and other subjects. We hope in a week or two to have all those committees strenuously at work. We have the promise of Mr. Cocks, the State Treasurer, that the data at the disposal of the State Departments will be placed at our disposal. I am hoping that before you leave you will have presented to you a copy of the brochure which was handed to every guest at the dinner and which we have since handed to any prominent citizens whose help we hope to enlist in the matter. But we are most energetically opposing all Town Planning Bills or Boards, and we are depending on the education of our citizens to desire and demand that such a thing as a Sydney Regional Plan shall be developed by the citizens for the citizens.

**Mr. Henderson:** We are on the same lines; our Bill may help your Regional Plan Committee.

**Mr. Waterhouse:** We shall be very glad to have it.

**President:** Mr. Waterhouse did not tell you one thing; that is, that the whole of the Regional Plan movement was started through the agency of the Institute, and he had a great deal to do with it.

With regard to the scholarship, I should like to say that as we have been able to put any little money aside we have done so; it has not yet reached £100, but year by year we are trying to put a little aside so that ultimately we may have some money for scholarship purposes.

#### Accounts for Payment.

**Mr. Henderson** moved, Mr. Laybourne-Smith seconded:

That the accounts accruing from the Conference, viz., Assistant Secretary, reporter's fee, typist, and audit fee, also account for Federal Medal be passed for payment.

Carried.

**President:** I would ask you to let our Assistant Secretary know of any changes that are made in the appointment of delegates, otherwise Mr. Lough does not know to whom to address communications.

**Mr. Henderson:** I would suggest that on the business paper for the next Conference be placed the item "Short Report from each Institute as to its activities."

**Mr. Waterhouse:** One matter suggested earlier in our sittings, was that we should endeavour to make detailed arrangements re the Canberra Deputation. I was going to suggest that the matter be left in the hands of the President to formulate some scheme and later on to let delegates know what to do.

**President:** I hope next week to be in Melbourne, but I was wondering whether it would be too early or whether arrangements could be made to meet Mr. Bruce then.

**Mr. Laybourne-Smith:** One thing I think we should record for the future protection of our Council. At the back of the printed minutes we have the Constitution, which contains some amendments which were made in February of last year. Each of the Institutes should have reported whether they accepted those amendments. I know that our Institute did, and you tell me that your own Institute did so. The scale of professional charges we have dealt with fully, so we know where we are. The other matters I believe have been accepted, but it is well that we should know. "Architectural competitions" have been accepted by us for some years. Then comes our "Code of Ethics," which were last amended in 1919. I understand that stands all right.

**Mr. Henderson:** Victoria accepted the amendments to Constitution.

**Mr. Laybourne-Smith:** You see, we cannot amend the Constitution without getting the States to agree to the amendment. The only amendments made were that delegates must be members of their own Institute. The other was that we need not meet in the States in rotation. Then the date of the meeting was cut out. I think those were all the alterations that were made, but we should know whether they were acceptable to the States.

**President:** Those amendments were accepted.

Now, with regard to the minutes of this meeting and editing them. We shall have a full transcript, and there are some things that want editing. I was going to suggest that we ask Mr. George Sydney Jones to do it for us. We can have a full copy each for our own private use.

**Mr. G. Sydney Jones:** I will be very pleased to take it on.

(The Conference concluded at 12.45 p.m.)

# SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS

## AND THE 44 HOUR PROCLAMATION

TABLE OF HOURS, WAGES, ETC.

Trade.	Country. 48 hours.	City and Suburban. 46 hours.	Date when takes effect.
Bricklayers ..	2/3½	2/4¾	June 22, 1923
Builders' Labourers— (State) .. ..	1/11½	2/0½	" "
(Federal 44 hrs.)	—	2/1½	May 4, 1923
Carpenters and Joiners .. ..	2/2	2/3½	June 22, 1923
Wharf Carpenters	2/2¾	2/4	" "
Plumbers .. ..	2/2	2/3½	" "
Slaters .. ..	2/3½	2/4¾	" "
Plasterers .. ..	2/3	2/4¾	" "
Painters .. ..	44 hours. 2/2 1/4	44 hours. 2/2 1/4	June 8, 1923
Quarrymen .. ..	2/3¾	2/6½	May 25, 1923
Masons .. ..	2/5½	2/8	" "
Electrical Mechanics	Hours. 48	Wages. 2/1¾	Nov. 24, 1922
Railway, Roads, Bridge, etc., Labourers .. ..	48	1/10 and upwards	May 18, 1923

Trade.	Country. Hours.	City and Suburban. Wages.	Date when takes effect.
Crane Drivers (Agreement) ..	48	2/7½	Feb. 16, 1923
Hoist Drivers ..	48	2/4½	" "
Builders' Carters	48	£4/4/6	May, 25, 1923
Machinists (Gen. Joiners) .. ..	44	£5/1/6	Apl. 27, 1923
Machinists (Labourers) ..	—	£4/5/6	" "

### Price of Materials.

Bricks (Common) at kiln, per 1,000 ..	72/-
Cartage of bricks to site (as per current rate)	
<b>Timber (Basic Prices)—</b>	
Hardwood, per 100ft. sup. ..	33/-
Oregon .. ..	35/-
Redwood .. ..	70/-
New Zealand White Pine and Rimu (6in. wide)	47/-
Richmond River or Hoop Pine ..	57/-
Cement, per three bags, according to quantity	20/- to 22/6

## INSTITUTE LIBRARY

### Library Rules for Borrowers.

1. If a book is lost or stolen from a borrower, or if the same is not returned by him within fourteen days, from the date of issue, he shall replace it, or pay to the Council the full value of such book. In case of the book being part of a set or series, and the borrower neglecting to return the same within fourteen days as aforesaid, or being unable to replace the same, in consequence of its having been lost or stolen, he shall pay to the Council the full value of the whole set or series.

2. A borrower shall keep the books borrowed by him from the Library clean and in good condition, and shall not tear, nor turn down the leaves, nor mark, nor deface, damage, or injure the book in any way.

3. If a book is torn, damaged, marked, defaced, or injured while lent to a borrower, such borrower shall, within one week of notification from the Council, replace the book, or pay to the Council the full value of the book; or, in case it is part of a set or series, and he shall not replace the said book, the full value of the whole set or series.

In cases where the book is replaced the borrower shall be entitled to the injured book.

4. A borrower shall be entitled to borrow only one

book at a time, but at the discretion of the Council two volumes of one work may be issued at the same time.

5. A borrower shall return any book borrowed at the latest within fourteen days after the date of issue; but books may be renewed upon application at the discretion of the Council.

6. If a book is not returned within the time prescribed by the preceding rule, the borrower shall pay the sum of sixpence for each and every day the book is retained beyond the prescribed time.

7. Certain volumes may not be removed from the Library, and are for reference only.

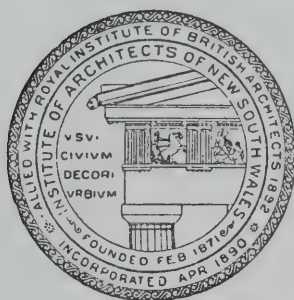
### LECTURES ON TOWN PLANNING.

The Vernon Memorial Lectures on Town Planning are being given again this year by Mr. John Sulman, F.R.I.B.A., at the University, and commenced Tuesday, 12th June. There will be twenty lectures in all, given on successive Tuesday evenings in the lecture theatre of the Peter Nicol Russell School of Engineering. Tickets for the course of twenty lectures are 10/- each and for single lectures 1/-. The University Extension Board is undertaking the arrangements for these lectures, particulars of which can be ascertained from the Secretary at the University.



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



AUGUST 15TH  
1923

VOL 12. No. 8

PRICE ONE SHILLING

# MINUTES OF AN ORDINARY GENERAL MEETING OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Held at 5 Elizabeth Street, Sydney, on Friday, 17th August, 1923, at 8 p.m.

## Present.

Sir Charles Rosenthal (President) in the Chair, and sixty members: Messrs. N. Weekes (City Surveyor), G. Raynor Hoff (Instructor of Sculpture, Technical College), and several visitors.

## Minutes.

The Minutes of the previous meeting (7/7/'23) were taken as read, and confirmed.

## Apologies.

Apologies were received from Messrs. R. Minnett, G. Sydney Jones, John Sulman, C. Chamber, Professor Wilkinson, W. Ifould, H. Joseland, J. C. Mills.

## New Members.

Messrs. J. Munnings and R. Ogilvie Brown attended for the first time since being elected to Fellowship, and were welcomed by the President.

## Canberra.

At the Special Meeting of Council (6/7/'23) Mr. Godsell's report in regard to Canberra was read and discussed, and referred to the General Meeting, but as the report is a very important one and the Institute wishes to discuss it fully, Mr. McCredie moved, and Mr. Hurst seconded, that the matter be deferred. Carried.

Mr. B. J. Waterhouse raised the question as to the advisability of appointing a permanent Exhibition Committee; he asked for members' opinion. The existing Committee, before proceeding with the work and arrangements for the next Exhibition, want to know whether they have the confidence (or otherwise) of the Institute.

Mr. Scott thought it is very unwise to continue with the same Committee year after year. In his opinion, the Committee should be appointed annually; new members frequently give fresh impetus, new ideas combined with the older men's experience should prove very valuable.

Mr. Peddle's opinion was that Council should appoint the Committee; the Committee to work under the control of Council.

Mr. Green thought that half the existing Committee should retire and fresh members be appointed each year.

Mr. Keith Harris agreed with Mr. Green's suggestion to a certain extent, but the difficulty is to get competent men; he thought it would be unwise to make a change unless the gap could be filled.

The President suggested that an Organising Committee and Secretary be appointed for the Exhibition Committee, and said that it would be placed on the agenda paper for next meeting. The Exhibition is improving annually.

## Guests.

The Institute welcomed and entertained Messrs. N. Weekes (City Surveyor) and G. Raynor Hoff (Instructor in Sculpture, Technical College). The President, in introducing the guests, spoke of each gentleman's excellent qualifications and credentials. Mr.



Mr. Norman Weekes.

Weekes comes to us with practically world-wide experience, and has come just at the time when Sydney is being almost reconstructed, giving him a wonderful opportunity of showing his skill as an Engineer; Sir Charles laughingly predicted that if Mr. Weekes can survive the first twelve months of his appointment



with the City Council, the remaining years of his work in Sydney would run along very smoothly indeed; he could assure him of the interest and assistance at all times of the Institute of Architects of New South Wales, and looked forward in the near future to welcoming him as a member of the Institute. Last, but by no means least, Mr. Weekes is a Service man. In Mr. Hoff (a native of the Isle of Man) Sydney is indeed fortunate in securing for our Technical College a man who has risen so high in his profession; architects may well learn a great deal from Mr. Hoff in the beautifying of our buildings; his work, as we all know, preceded him, and we have every confidence that in the high position which Mr. Hoff has come to fill, he will undoubtedly make good. He would also remind members that Mr. Hoff's work is on view at the Technical College, and he hoped the Institute would take advantage of seeing this fine sculpture.

Mr. Spain expressed his great pleasure in welcoming to the Institute two gentlemen who, he was sure, would prove a great asset in their respective professions to Sydney. In his opinion, the appointments in both cases were unique; in fact, regarding Mr. Weekes's he did not know of such an opportunity coming any young man's way as this particular appointment, the chances to show his ability were simply boundless. He had no doubt whatever that Mr. Weekes would make good. He hoped he would have the company of these gentlemen at many of our meetings, and would assure them of a very hearty welcome. Perhaps at some future meeting Mr. Weekes would be persuaded to read a paper on a subject of interest to architects and kindred societies; it would be much appreciated by members. He welcomed them to the Institute.

Mr. Scott, in adding his welcome to the guests, said that he was indeed glad to meet both. Mr. Weekes, he said, was a countryman of his own, and he hoped that he would do the same as he (Mr. Scott) had done, spend many, many years in this land of sunshine. He wished them every success, and predicted that they would both be so happy and successful in sunny Australia that they would be loth to leave it. He had great pleasure in welcoming them to the Institute.

Mr. Hurst congratulated Sydney in securing these gentlemen for the respective appointments; he looked forward to a great deal of benefit to architects in the knowledge and experience both had brought. Sculpture was a fine art allied to buildings which gave the necessary beauty and finish the City required. He had great pleasure in welcoming the guests to the Institute.

Mr. Jackson, in a humorous little speech, welcomed the guests. He had very great pleasure in welcoming

both gentlemen to our Institute, and hoped their respective appointments would keep them many years in Australia. He looked forward to having them both with us on many occasions.

Mr. Weekes, who on rising received an ovation, said that it afforded him the very greatest pleasure to be the guest of the Institute of Architects of N.S.W. Sir Charles had warned him when he took up the position of City Surveyor to beware of many pitfalls; well, he had commenced duty with more or less trepidation, but he could assure members that the great assistance and advice he had received from Sir Charles since his arrival in Sydney had been so helpful that he began to think that the pitfalls were not so terrible; he thanked Sir Charles. He said that he is an Engineer by profession, and an Architect from choice; he found the Art in Architecture such a delight from engineering, which is necessarily ugly. He thanked members most heartily for the splendid and kindly welcome he had received. He will be pleased to read a paper at some future meeting.

Mr. Raynor Hoff, who was received with much cheering, thanked members of the Institute of Architects of N.S.W. for their welcome. He hoped too



Mr. G. Raynor Hoff.

much would not be expected from students at first; there was a great deal of spade work to be done before he could expect to show very much result. He had been agreeably surprised in many ways at what had already been accomplished, some of the work equalling anything he had seen on the other side of the world. He expressed great pleasure in being invited to meet

members of the Institute. He again thanked them for their kind reception.

Sir Charles said that the thanks of the Institute were due to Mr. Waterhouse, who had made all arrangements and also organised a most delightful musical programme. Mr. Waterhouse bowed his acknowledgments.

Mr. Penn entertained the audience with several pianoforte solos in his own inimitable way, and accom-

panied the singers: Sir Charles Rosenthal, Mr. McBurney, and Mr. De Putron; all these items were much enjoyed. Mr. Scully's violin solos called for persistent encores.

The meeting was one of the most enjoyable the Institute has held. Proceedings terminated at 10.30 p.m., the whole audience joining heartily in singing "For they are Jolly Good Fellows" and the "National Anthem."

## COMPETITION FOR NEW BUILDINGS FOR Y.W.C.A. SYDNEY

The competition in connection with this important building resulted in fifteen sets of drawings being received. Mr. G. H. Godsell (ex-President of the Institute of Architects) was the Adjudicator.

The building is to be erected at the corner of Liver-

The order of placement was as follows:—

Design.	Firm.	Position.
No. 6	Messrs. Waterhouse & Lake	First
" 4	" Joseland & Gilling	Second
" 12	" McCredie & Anderson	Third



Site of the proposed new Y.W.C.A.

pool and Commonwealth Streets, the main front facing Hyde Park. The site will necessitate the demolition of three interesting old houses, which have been a landmark for so many years, photographs of which are reproduced in this issue.

No. 14 Messrs Budden & Greenwell Special Mention.  
 „ 3 „ Burcham, Clamp and  
 Mackellar .. .. Special Mention

The premiums were:—

1st ..... £250. 2nd ..... £100.  
 3rd ..... £50.





Corner of Liverpool and Commonwealth Streets, to be demolished.

## THE R. KEITH HARRIS EXHIBITION

Architects and students who failed to visit the exhibition of drawings by Mr. R. Keith Harris, A.R.I.B.A., recently held at the New Art Salon, George Street, under the direction of Mr. Basil Burdett, missed an unique opportunity of studying work of sound and interesting quality. In these days of the slick and meretricious delineation, feeble observation, and affected rendering it is refreshing to study the work of an artist who, viewing architecture and landscape sanely, endeavours to portray truthfully, appearance under the action of light.

Mr. Harris's work may be considered from two aspects: the rendition of architectural subjects, and that of landscape.

It is given to few men to be equally successful in both essays, and, as might be expected, those consisting of an architectural motif appeal more insistently. Soundly drawn, true in colour, they exhibit a sanity of view and clarity of vision highly commendable, and possess qualities which our students would do well to study and endeavour to emulate.

The landscape section contained many interesting

efforts, indicative of that delight in nature, and sheer joy in the doing, which more than compensated for a somewhat metallic and "edgy" rendition.

Mr. Harris's *The Water Garden, Kensington Garden*, is a fluent and charming piece of water-colour which would hold its own in most exhibitions of examples in that alluring, subtle and illusive medium.

The exhibition consisted of about 70 drawings, and in addition to the architectural and landscape water-colours, a number of pencil drawings added interest, all accurately drawn, and in these Mr. Harris indicated an unerring eye for picturesque grouping; the defect, if any, being a lack of tonal quality, not uncommon in an architect's drawings, who, by virtue of his training, is apt to see too much line and detail and fail to reduce the object to its lowest terms, so delightfully evident in such work as that of Muirhead Bone, D. Y. Cameron and Vernon Howe Bailey.

The effort to overcome an innate modesty that the "one-man show" in this instance demanded, is a cause for hearty congratulation from the profession, and it is hoped that others will "go and do likewise."

## INSTITUTE LIBRARY

### *Library Rules for Borrowers.*

1. If a book is lost or stolen from a borrower, or if the same is not returned by him within fourteen days, from the date of issue, he shall replace it, or pay to the Council the full value of such book. In case of the book being part of a set or series, and the borrower neglecting to return the same within fourteen days as aforesaid, or being unable to replace the same, in consequence of its having been lost or stolen, he shall pay to the Council the full value of the whole set or series.

2. A borrower shall keep the books borrowed by him from the Library clean and in good condition, and shall not tear, nor turn down the leaves, nor mark, nor deface, damage, or injure the book in any way.

3. If a book is torn, damaged, marked, defaced, or injured while lent to a borrower, such borrower shall, within one week of notification from the Council, replace the book, or pay to the Council the full value

of the book; or, in case it is part of a set or series, and he shall not replace the said book, the full value of the whole set or series.

In cases where the book is replaced the borrower shall be entitled to the injured book.

4. A borrower shall be entitled to borrow only one book at a time, but at the discretion of the Council two volumes of one work may be issued at the same time.

5. A borrower shall return any book borrowed at the latest within fourteen days after the date of issue; but books may be renewed upon application at the discretion of the Council.

6. If a book is not returned within the time prescribed by the preceding rule, the borrower shall pay the sum of sixpence for each and every day the book is retained beyond the prescribed time.

7. Certain volumes may not be removed from the Library, and are for reference only.



## WAR MEMORIAL COMPETITION

The Imperial War Graves Commission invites architects who served during the War (1914-18) with the Naval, Military, and Air Forces raised in any part of the British Empire to submit their names for admission to a competition for design of memorials to the missing.

The memorials will be erected by the Commission in France in the neighbourhood of Bethune, Armentières, Cambrai, and Soissons, and will be inscribed respectively with 20,000, 15,000, 6,000 and 5,000 names.

Applications for particulars, premiums and regulations should be addressed to the Secretary, Imperial

War Graves Commission, London, and reach him by January next, accompanied by a statement showing war service, professional career of the applicant, and stating clearly which memorial he is competing for. A deposit of £2/2/- is required for each set of plans, etc., which deposit will be returned on receipt of a *bona fide* design or the return of the plans, etc., in good condition.

The assessor appointed to examine and report on designs is Sir Ashton Webb, P.R.A., the eminent London architect.

## SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS AND THE 44 HOUR PROCLAMATION

TABLE OF HOURS, WAGES, ETC.

Trade.	Country. 48 hours.	City and Suburban. 46 hours.	Date when takes effect.
Bricklayers ..	2/3½	2/4¾	June 22, 1923
Builders' Labourers— (State) .. ..	1/11½	2/0½	" "
(Federal 44 hrs.)	—	2/3	Aug. 3, 1923
Carpenters and Joiners .. ..	2/2	2/3½	June 22, 1923
Wharf Carpenters	2/2¾	2/4	" "
Plumbers .. ..	2/2	2/3½	" "
Slaters .. ..	2/3½	2/4¾	" "
Plasterers .. ..	2/3	2/4¼	" "
	44 hours.	44 hours.	
Painters .. ..	2/2 1/4	2/2 1/4	June 8, 1923
		40 hours.	
Quarrymen ..	2/3¾	2/6½	May 25, 1923
Masons .. ..	2/5½	2/8	" "
	Hours.	Wages.	
Electrical Mechanics	48	2/1¾	Nov. 24, 1922
Railway, Roads, Bridge, etc., Labourers .. ..	48	1/10 and upwards	May 18, 1923

Trade.	Country. Hours.	City and Suburban. Wages.	Date when takes effect.
Crane Drivers (Agreement) ..	48	2/7½	Feb. 16, 1923
Hoist Drivers ..	48	2/4½	" "
Builders' Carters	48	£4/4/6	May, 25, 1923
Machinists (Gen. Joiners) .. ..	44	£5/3/-	July 27, 1923
Machinists (Labourers) ..	—	£4/7/-	" "

### Price of Materials.

Bricks (Common) at kiln, per 1,000 ..	72/-
Cartage of bricks to site (as per current rate)	
<b>Timber (Basic Prices)—</b>	
Hardwood, per 100ft. sup. ..	33/-
Oregon .. ..	35/-
Redwood .. ..	70/-
New Zealand White Pine and Rimu (6in. wide)	47/-
Richmond River or Hoop Pine ..	57/-
Cement, per three bags, according to quantity	20/- to 22/6

# ARCHITECTS AND CLIENTS

## R.I.B.A. President's Advice.

An address marked by much originality and characteristic charm was recently delivered to the younger members of the architectural profession by Mr. Paul Waterhouse, M.A., the distinguished President of the Royal Institute of British Architects, upon the somewhat delicate subject of "Clients."

Mr. Waterhouse in the course of his remarks said:—

"The subject of clients is so fraught with delicacy that it is almost ranked among the indelicacies of conversation. I do not remember to have ever heard a responsible architect with clients of his own speak publicly upon the topic. The reason for this lack of utterance may possibly lie in the fear that no man can possibly speak from experience of clients in the past without hopelessly alienating the clients of the future. I have no such fear; for in the first place the employers of my past energies have seldom or never failed to deserve the kindest things I can say of them, and in the second I do not propose to utter anything to-night on the subject of clients in general that could bring any blush, but that of satisfaction, to their honest cheeks.

"Do you all know what a client is? The word has a strange origin, and has in the course of history, partly, I believe, through the action and attitude of lawyers, turned itself upside down.

"A powerful Roman, on whom waited a hungry crowd of dependents, was wont to call himself their patron or *patronus*, and the dependents, who did not mind what name they took so long as they got his favours, were dubbed clients. Literally, I understand, the word means one who listens eagerly, and, therefore, so long as our employers are waiting like faithful hounds with ears cocked to catch our slightest word we may appropriately call them clients. But in this age of ours the queue system for employers of architects is, I believe, confined to one or two rather grave cases, and until it becomes a nuisance of general application I am given to think that the word is, from an antiquarian point of view, rather misapplied. The patron was the legal protector of his clients. Hence came the modern application of the word client to a solicitor's or barrister's employer. The application soothes the lawyers, but I have never heard of a lawyer who went the length of setting himself up as a *patronus*.

### Ways and Means.

"Anyhow, there are the clients for you—or there may be—and I mean to talk about them, even if I venture,

out of respect for the class, occasionally to call them employers.

"A great part of your business, if you are going to swim and not to sink, will consist in the successful treatment of your employers. You will please observe that I have escaped using the word 'management.'

"I escaped it on purpose, because any idea of illicit persuasion, or cajolement, or of deceptive encouragement is entirely foreign to what I have to say to-night.

"There is one very simple, very obvious, and very rational condition embodied from the very beginning in every transaction between an architect and his employer. It is so radical and integral that it astonishes me to find how frequently it is entirely overlooked by both parties.

"The client's outlook on the coming job is hedged in, like most fields of logical enterprise, by two data, which you may call, if you are in a logical mood, the major and minor premises. But since the word 'premises' is liable to be misunderstood in connection with architecture, and since these two data are of equal cogency, and are not necessarily pulling in the same direction, I prefer to call them the two counterpoises.

"One of these, of course, is the house (or other building) that the employer wants, and the other is the sum of money he is content to spend. Observe I do not say the house he first asks for or the sum he first names.

"And when I thus differentiate I am not at all implying that he is going to be screwed up to a building more costly than he wants or can afford, but simply that you and he, acting on one another, may modify these conditions at a very early stage in various directions.

"Anyhow, there are these two elements—the price offered and the building wanted. Will they fit one another? It is a hundred to one that they will not. If they do not, it is well to remember that this misfit is probably nobody's fault.

"At this stage it will be your privilege to point out to your employer that something has got to give way. The original idea of the house must be reduced or the sum of money must be increased. If you are both honest and really capable, no embarrassment attends the explanation. But you must be quite sure in your own mind that you are capable of working without extravagance.

"The expedient at this stage of deceiving your client or yourself with an approximate estimate based on an



unreasonably low factor of price is, of course, unparadonable, as well as very impolitic.

"You should always make approximate estimates and, I entreat you, always keep them. Start an approximate estimate book as soon as you have a brass plate, check each estimate with the contract figures, check it also with the final account, and keep it till you can hand it over to your office successor.

"When you have satisfied your employer about price and he has satisfied himself about size and degree of luxury or simplicity, there remains still, as we all know, the great question of agreement on questions of taste. Here is, or may be, the hardest trial of all. You may, it is true, come to a parting of the ways at which your ways must literally be parted. Your conscience as an artist may compel this severance. But it should not come before you have made sure that it is art, not obstinacy, that is stiffening your backbone, and until you have realised that there is more than one way of doing even a work of art. Certainly you should never do a work of which you are ashamed, but there is a difference between shame and mere disappointment, and you may be able, by substituting simplicity for your own choice of display, to achieve a triumph—not of mediocrity, but modesty. It is in cases where your patron asks for the too much rather than the too little that your profession of faith is most likely to be put to the trial.

"Shall we remember here to come back for a moment to the more elementary essence of your craft, that architecture, as I have said elsewhere, is not so much a noun as an adverb. And the adverb is not 'how much,' but how.

### **Worthy of Trust.**

"The client pays for his house to be built. The builder builds it. The whole business of 'how' it is built is yours.

"It is with no disrespect towards clients that I tell you that they are of different kinds. Being human beings, they can hardly fail to differ. And these differences which make them so interesting as employers are partly differences of mentality and partly differences both of taste and of wealth. It is your business to be perfectly respectful students of these differences, not merely in your own interests, but in theirs. Remember, it is you who stand, not as antagonists before your employers, but as mediators between them and the fulfilment of their own desires. There are some people who find great difficulty in expressing their needs. To them you will be helpful in guiding that expression. There are some who do not fully know their needs and who look to you for initiation into likely directions. Others there are who require your services chiefly because they

rightly look upon an architect as the doorkeeper of building enterprise, just as a solicitor is the doorkeeper of law. It is well at the outset to discover by observation and with tact what is the light in which you are viewed, and, if possible, to make sure without any derogation from your office as artists that you do to the utmost of your ability supply, along with your artistry, that guidance, that prompting, or that specially businesslike alacrity which your employer quite legitimately seeks.

"You will find some clients—both individual and bodies corporate—who do not trust you. I do not blame them, for their attitude is caused either by unhappy experience in the past or by incorrect information as to the nature of an architect. It is best in such case to make sure at an early stage of your own intention to be scrupulously worthy of trust, and, if possible, to convince your client in such a way as to change his mind. I say this is not for your sake, nor wholly for his sake, but for the sake of the job.

### **Financial Guardians.**

"I once had such a client—he was a corporate one—on a fairly large scale. Banking on the certainty that I should lead that body corporate into an expenditure 20 per cent. in advance of the contract, the said body cut my authorised expenditure down accordingly. I, being honest, robbed the building of certain things which I should have dearly liked to have incorporated in it, and came out of the final accounts triumphant. At least, I thought it was a triumph until I met the Committee, when I discovered that my parsimony was a genuine disappointment. Let us gather from this experience, not that we may always exceed our orders, but rather that, if we all unite in keeping up the general reputation for working to a fixed figure, we shall kill that reputation for expansion, the rumour of which had led my friends into a temper of insufficient confidence.

"But there are other minds who equally need our respect. There are employers to whom the achievement of a really fine building is of greater importance than the saving of money.

"It will happen to you if you become moderately busy men that you will be simultaneously the stewards of the finances of employers, some of whom are at opposite extremes in this respect; and I know nothing more difficult than the exercise of brain demanded by having to turn, perhaps in the very same morning, to the interests of those who demand rigid economy, those who look for a perfect building, and those, again, on whose behalf decisions have to be taken on doubts, in which the counterpoise of perfection and cash has to be very evenly weighed.

"No large building, however carefully planned and specified, gets through its whole course of creation without any variations. These variations are beset at every turn by the question of cost, and every question of cost has to be judged by one criterion only—that of the inclinations of the client. I say 'of his inclinations,' which is not the same as saying 'his wealth,' and by no manner of means the same as your personal wishes.

"You will think that I am degrading architecture to the level of rather sordid finance. Let me put the thing in another light. If an employer were to bring you an irregular mass of costly marble and were to say to you, 'It strikes me that this queer-shaped but precious block might be so cut that we could obtain from it material for the jambs and pediment of a doorway. It is unique, no man can obtain more of it; it is so valuable that we must not leave any of it unused.'

"With what gaiety of heart would you set your ingenuity to work to get some original design achieved which would employ every ounce of that material and call for no more. My young friends, the stipulated price named for his building by a client whose means or legitimate wishes are limited is just such a block of precious metal.

"If you have *carte blanche* it is another matter, and if the *carte blanche* relates not to money only, but to a free exercise of your own fancy, you are lucky indeed. But, remember, the greater the trust the greater the responsibility; and remember also that the best architecture is wrought as a rule from the conflict with limitations.

"Remember, again, that quite apart from the question of future favours there is no friend like an old client. The relationship of architect and employer is one of the most intimate and delightful nature when nothing mars its perfection. The architect is, on the whole, the more likely of the two parties to disturb the smooth surface of that delicate relationship, for he has more opportunities of failure and is more greatly at the mercy of chance. Therefore, be ever on the watch, remembering through all your difficulties, the value which your appointment has outside its pecuniary and professional nature.

"To this end be very loyal. You are, if your work is a domestic work, admitted to an interior knowledge of your client's family life which is very near that of the doctor and very like that of the solicitor.

#### Soliciting Work.

"Never tell stories of one client to another. Con-

sider the financial side of your transaction as a confidential secret, and regard as sacred all intimacy to which you are admitted.

"If trouble comes between you, search your own mind for the cause of it, remembering that your employer, being a gentleman, may shrink from telling you what is the real cause of the break.

"Now let me talk quite boldly about the unspeakable subject of asking for work. You and I know that it 'isn't done,' but when we have said that, we have said what isn't historically true. But between sending a letter of definite appeal direct to the projector of a building and lying low there are a great many fine shades of discreet or indiscreet suggestions, and persons have been known to draw the line for themselves at various points between zero and the boiling point. I am not going to tell you where the right line is, except that speaking in terms of the thermometer, I believe it is somewhere between zero and freezing point, and that the further it is below 32 degrees the better. I do not suggest that a man should keep his candle under a bushel, but he should not push it under people's noses.

"I have, however, one appeal to make. *Every man who does in any degree propose his own employment, except by the legitimate means of competition and the like, not only does injustice to the more modest and loyal practitioners, not only breaks the code of our etiquette, which is, after all, a sportsmanlike agreement with one another, but he paves the way for a possible breakdown of the condition under which we all live and work.*

"Consider for a moment the strain under which we should all live if the solicitation for work were general, and if we felt it our duty to ourselves, our wives and our families, to be always out on the warpath attacking every opening and besieging every likely promoter of building enterprise.

"Gentlemen, if you wish our profession to 'live happily ever after' and to be respected by those to whom we owe our opportunities, set your faces against self-recommendation.

"The best people don't do it. Be best people.

"In conclusion, I hope for you all that you may enjoy from the outset—through all the successes, disappointments and worries of honourable and happy careers, those pleasures and satisfactions which have been my own cherished possession—the friendship and trust of good clients."



# ARCHITECTURAL PRACTICE IN AMERICA AND ENGLAND

By Professor C. H. Reilly.

The technical processes of any art are of interest to the layman as well as to the practitioner. Indeed, they are often more so. The layman is apt to imagine that if he only knew the technique of an art he would be able to practise it. He feels confident that he has the necessary imagination. We all claim the artistic temperament nowadays and would as soon admit that we lacked it as that we lacked good taste or good breeding.

There is a certain general interest, therefore, to be gained from considering the different methods by which architecture is produced in this country and America. We have all learnt to admit by now that in town buildings their result is more satisfactory than ours, whereas in country buildings the reverse is the case. Let us take that for granted, then, and see whether the different ways in which the architects of each country work can be considered responsible for the result. My own opinion is that they can. It is not so much a matter of temperament, as one of training and organisation.

First, what are these differences in result? In what main way is American civic building better than our own, and in what way do we score in domestic work? I think the answer is easy, however diffident one is of easy generalisations. The success of American town building lies chiefly, in my opinion, in its impersonal character. It is reserved and remote, grand in scale, elegant, if rather frigid, in detail. Even in a small façade it is rarely intimate and individual. But this impersonal character is just the quality civic architecture should possess. It was the quality pre-eminently of our eighteenth century architecture, whether in town or country. If one can borrow a simile from clothes, our eighteenth century Palladian buildings always looked well cut. Without any great variety, they had definite distinction of style. It is this town style, this sense that they have been well tailored, that the new American buildings in their chief towns possess. They have none of the happy-go-lucky rusticity of our own new work. They are rarely over-exuberant, like the new buildings in Regent Street, or cut like "plus fours," as the insurance office in the Strand, which has a Gloucestershire farmhouse split-stone roof. It is of the essence of town clothes that they should be a sort of uniform, that the licence in colour and individuality in cut, which may be permissible in the

country or on the golf course, should be absent from them. Individuality of cut, if it appears at all, must appear with extraordinary discreteness. So it should be with town architecture, and so it was in the eighteenth century. What is wrong with our own urban buildings is that as architects we are too desirous to express in it our own individuality, too anxious to make our buildings different in shape, colour and texture from those of our neighbours. We think too little of the town and too much of ourselves. Our town buildings are too individual, too personal and, it must be confessed, too often too over-dressed.

In the country, however, all this is reversed. The sites and surroundings vary, neighbours are distant and personality can express itself. The very qualities—except the overloading with ornament, which is never successful—that make a failure of our town buildings make a success of our country ones. We want a country house to have marked individuality and character, and that is what our best English architects can be relied on to achieve.

The great difference between English and American architecture may be reduced, therefore, to this question of individuality. Let us see whether there is anything in the different ways in which the architects of the two countries work to correspond to this result.

The chief difference between the American architect's office and his English colleague's is one of size and organisation. The American architect either works in simple partnership with a number of colleagues, whom he calls partners or associates, or he employs in a salaried capacity persons who, by their training and experience, can share responsibility as a partner would. The resulting work is the work of a group rather than that of an individual. The final scheme has not only passed the criticism of many minds, but has had its birth in several. Obviously, this is only possible where there is some preliminary agreement as to the convention or style to be used, and where the methods of work among the partners are alike. If one partner designs to one scale on impervious paper and another to another scale on tracing paper, it is easy to see that ideas would not flow smoothly from one to the other. The fact that by now most American architects have either received their training in the *Ecole des Beaux Arts* in Paris or one or other of the great American schools of architecture

whose system follows that of the Ecole means that they have all learnt to approach their problems in the same way. By all working on tracing paper to a small scale to the last moment they are able to give to the work before them a long preliminary study in which the ideas each partner and designer has to offer are tried out and exhausted, till the best solution—or “parti,” as it is called—is found. It is only when this has been discovered and all are satisfied that the building is allowed to be crystallised into working drawings. When these are made, however, they are very different things to working drawings in this country. They are prepared with a dimensioned minuteness and exactness one might think not merely waste of time, but rather hampering even in the erection. We are a conservative people, who do not like to make up our minds too definitely or too quickly. In designing a building we like to leave a good many things for further consideration as the job progresses. There may be occasional advantages in this, especially in domestic work. But in America everything is settled in the draughting rooms before the job commences and the contract is let. It is settled, down to the run of every pipe and the position of every rivet. Separate large-scale drawings are made even of such uninteresting but necessary work as the plumbing. The result is that the building contractor knows exactly what he has to do from the very start, and can organise his work accordingly. That he will not have to make any alterations during the progress of the work, that he will have to cut through no floors or walls for pipes or electric light leads is a very considerable saving to him, both of time and money, and, consequently, to the client. To get the best for one's client's money is not the least among the aims of the architect, even in America, where money is so plentiful. Here, in the present stringency, it is more than ever important; and architects, if they are to retain their position, must take every possible step to ensure no waste of any sort through want of such foresight. I think the practice the American architect employs of making his large-scale details—which come between his general plans and his full-size drawings—to the large scale of  $\frac{3}{4}$ in. to a foot instead of  $\frac{1}{2}$ in. to a foot, tends in the same direction. Practically no detail of a building is too minute to be shown on this scale.

All this work on the drawings before the building starts means, of course, the employment of a large number of trained draughtsmen and the outlay of a great deal of money. It may be replied that the work over there by its size and expense warrants this, whereas the work over here does not. That may be true, and it is a point which will have to be met. At present we are only concerned in comparing the two

methods of work and the results achieved. There is, however, a limit to the number of draughtsmen that can be usefully employed to each designing head. Mr. Corbett, the author of the London Bush Building, put the number to me at fifteen. He said that was the maximum number which could be efficiently employed: by which he meant that one real designer could not solve problems and turn out ideas at a faster rate than would satisfy the maw of fifteen draughtsmen all struggling to draw them out. I quite agree with him—indeed, the number seems to me alarmingly large. I should not like to have to keep fifteen draughtsmen always needing feeding with ideas as well as salaries. However, this number, which is largely exceeded in many offices, is explained by the thoroughness of American working drawings. It must be remembered, too, that over there they have no independent profession of quantity surveyor standing between the architect and the contractor and telling the latter how many bricks, how many tons of steel, how much plaster he will require. The contractor estimates directly from the drawings, so that these have to be complete in every respect or the contractor will turn round later and say such and such a thing was not shown. Indeed, I trace a good deal of the high quality of American working drawings to the absence of that very convenient gentleman we in England have all learnt to rely on—and rely upon too much—the professional quantity surveyor.

The same thoroughness and organisation which are shown in the working drawings are to be found in other sections of the work. An American firm of architects, in anything like big practice—and it is such who carry out the city buildings we are discussing—keeps in its continuous employ a series of experts. It will have in the office an expert in steel construction, an expert in heating and ventilation, one in plumbing, another in writing specifications. All these men are recognised and are introduced to the clients. There is no pretence made that the architect himself or his partners are omniscient beings doing all the work themselves. Indeed, the American architect is very proud of his organisation, and one of the first things he impresses on his prospective client is the quality of the machine he can put at his disposal. He will display it and make the most of it, walking his client through his various draughting rooms and introducing him to the men who are going to help in the forthcoming work. He will not forget to show him the large centrally placed library in which are stored photographs and measured drawings of all the best buildings of the world, which buildings are to be in a real sense the parents of his new one, but he will also show him his costing department with its women clerks who total



up each day the money spent on each job, his system of filing drawings, and all the other mechanical sides of his work. We in England, so anxious to be thought artists, are a little ashamed of all this and hide it away as much as possible. But the American architect, realising that there is no inherent reason why the artist should not be an efficient, practical person or, at any rate, part of an efficient, practical organisation, holding rather that he must be if he wishes to be a good architect, is rightly proud of it.

This co-operative method of work in which no single individual claims the whole authorship or credit for the resulting work, nor is, indeed, entitled to, does seem to account both for the impersonal character of American civic architecture and its undoubted efficiency, which together make their modern town building so satisfactory. It means that the general standard of work is very high, and in a town it is the general standard, rather than the few individually good buildings, which is important. It means, however—and this must be faced—a few big architect's offices, fully equipped with specialists of all sorts, rather than a multitude of small men each struggling independently with a few small jobs and being rather overwhelmed when a big one eventually comes along. Are we prepared for the necessary combinations? Will the young English architect just starting practice on his own account be content with a seat in the office of the big firm of Messrs. Wren and Jones, even if his name appears only in small letters under theirs as an associate? If he is, and if he is treated as he would be in America, he will receive a fair salary and a small share in the profits of the firm which will put him in a far better, and, of course, much safer, financial position than he could hope to be for many years on his own account. But would his artistic ambition be satisfied? Would he be content to sink his personality in this way? I think, were he once convinced that this was the way to produce a series of really fine buildings and the only way, he would. But we have yet to see buildings produced like this in England. Perhaps, when the great Bush group in the Strand is finished, instead of less than a third of the scheme as at present, some may be converted. For, after all, it is not only the young man who has to be converted, it is the seniors who have the practice. It is they who have, in the first instance, to alter their methods. They are perfectly willing at present to receive the young men into their offices and to employ specialists if they have enough work, but they are not willing in the American way to recognise them. They are not willing, that is to say, to make the young men feel that they are an essential part of their organisation and as such are entitled to their share of the credit. I only know one who is—Sir John Burnett. But in America we have the great firm of

Messrs. McKim, Mead and White still going on, though McKim and White have long since been dead, and Mead is now a very old man with little influence on the work. One is inclined at first to resent this and say it is sheer commercialism—the trading on a goodwill which no longer exists. But that is the point: the goodwill not only exists, but the reason for it. The great machine, with the tradition it has built up, is still there. The same designers are at work who have been in it for the last ten years. American clients, if they employ a great firm like this one, or Messrs. Carrere and Hastings, Messrs. York and Sawyer, or half a dozen others equally celebrated, know that their building will be up to a certain definite standard of elegance and efficiency. They will know the great range of buildings to which the name of each of these firms is attached, and, knowing this, they would feel a certain safety in employing any of them even if none of the principals was still at work. American clients take their architectural responsibilities as seriously as their architects do theirs. They do not as often as English ones, apparently, give their big office buildings into the hands of their wives' cousins who have just opened offices, but have no other claim to be architects. The general tendency, there is no doubt, is for work to accumulate in the hands of the successful few, who thereby become more and more successful; but, up to a point, and as long as the resulting work is good, this seems to me to make for efficiency. I should not like to see this system grow up in England, however, unless the older men accepted the younger ones on terms of greater liberality. I do not want to see any architectural sweating, however beautiful our towns may become in the process. But now that there is an army of properly trained young men, which England today possesses equally with America—an army she did not possess twenty of even ten years ago—I want to see these men properly employed, not as mere hacks, but helping seriously in the great work, which still lies before us, of making our cities once again beautiful places. To a great extent America has already achieved this, and we certainly have not. It is worth while, therefore, considering whether her methods have not been a lesson for us. After all, it was by the co-operation of unknown men that our great Gothic cathedrals were designed and built. In them the individual was willing to sink himself for the good of the work. May not the redemption of our civic architecture lie in the same direction. It certainly did in the eighteenth century, when a strong tradition acted as a successful restraint on excessive individualism. May not a restraint of a different kind, such as American organisation produces, be the solution, both in cost and efficiency as well as in expression, for the twentieth century?

## FEDERAL COUNCIL OF AUSTRALIAN INSTITUTES OF ARCHITECTS

# COMPETITION FOR AN ILLUSTRATED THESIS ON THE ARCHITECTURE OF THE RENAISSANCE IN ITALY, A.D. 1400-1600

**Invitation.**

The Federal Council of Australian Institutes of Architects offers a Bronze Medal for Competition amongst all students of Architecture of not more than 29 years of age at the date of closing of the Competition for

**The Best Illustrated Thesis**

on The Architecture of the Renaissance in Italy during the period 1400-1600 (approximately).

The closing date of this competition is October 31st, 1923.

**Adjudication.**—The Competition will be assessed by the following three assessors, viz.:

Walter H. Butler, F.R.I.B.A., of Victoria.

G. Sydney Jones, A.R.I.B.A., of New South Wales.

Walter H. Bagot, A.R.I.B.A., of South Australia.

The decision of the Assessors in all matters connected with the Competition will be final and binding on all competitors.

**Conditions.**

**Responsibility of Federal Council.**—The Federal Council collectively and individually does not accept responsibility as to the safe transit, custody or return of the Theses forwarded or delivered by competitors, but it undertakes that all reasonable care will be exercised to prevent damage during the period they are in its custody, and that all Theses not placed will be returned to the authors without delay.

The Council reserves the right to publish any or all the Theses.

**Subject Matter.**—No Thesis should exceed 10,000 (Ten thousand) words. The work of the late William J. Anderson, A.R.I.B.A., on this period (latest edition) is to be taken as the principal text book, but competitors are advised to read the subject as fully as possible.

The following works are recommended:—

Prof. Simpson: *A History of Architectural Development*, Vol. III.

Prof. Banister Fletcher: *History of Architecture*. Large Plates.

P. Letarouilly: *Edifices de Rome Moderne*. Plates.

I. C. Raschdorff: *Palast Architektur von Ober-Italien und Toscana*. Plates:

together with any others quoted in Anderson's List of Selected Books which may be accessible.

A too literal resumé of the text is not desired, but quotations may be made in inverted commas.

Where authorities are found to differ in criticism, an opportunity occurs for statement of individual views. Biographical and statistical facts are of less importance than descriptive analysis of personal style, and of the distinctive features of a design.

Concentration on the work and the spheres of influence of ten principal masters is preferable to a slighter reference to a greater number.

**Illustration.**—By means of freehand sketches and geometrical drawings, may be in Indian Ink or in fixed pencil and neutral wash. Standard size of sheets, 15 inches by 11 inches should be adhered to, but, if required, larger sheets may be

reduced by folding to this size. Thirty per cent. of total marks will be awarded for quality and number of illustrations, 15 per cent. in addition for selection of same.

Illustrations should include:—

- (a) Small scale diagrammatic plans and sections of typical churches, palaces, etc.
- (b) Numerous freehand or partly freehand sketches of details not necessarily large nor highly finished. Several of these may be grouped on one sheet. Marginal sketches in the text are commendable.
- (c) At least one full plate geometrical drawing, illustrating a characteristic mannerism of each of the principal masters referred to, by portraying a complete feature, e.g., one Bay of a Façade or Cortile, a balconied window or enriched doorway.

**Manner of Submission.**—Each competitor may submit only one Thesis with accompanying illustrations. Each Thesis is to be submitted without revealing the name of the competitor. The Thesis and sketches shall not bear any motto, name or distinguishing mark or decorative border, but all Thesis shall be accompanied by a sealed opaque envelope containing the name and address of the author, and a declaration that the Thesis and illustrations are his own personal work. Such sealed envelope, which must be securely attached to the Thesis, will be numbered on receipt, and not opened by the Assessors until the adjudication is complete and the award made.

The successful competitor must be prepared to satisfy the Assessors that he is the *bonâ fide* author of the Thesis and illustrations submitted.

A Thesis shall be excluded from the Competition:—

- (a) If sent in after the period named herein (Accidents in transit excepted).
- (b) If it does not substantially fulfil the conditions stated herein.
- (c) If the competitor shall disclose his identity or attempt to influence in any way the decision of the Assessors.

**Closing Date and Delivery.**—The Competition will close at 4 p.m. on October 31, 1923, and Theses must be received on or before the above date by Mr. John J. Lough, Assistant Secretary of the Federal Council, 5 Elizabeth Street, Sydney, New South Wales.

**Questions.**—Any questions arising out of the conditions may be addressed in writing to the Assistant Secretary of the Federal Council (Mr. John J. Lough) on or before December 30, 1923. Such replies as the Assessors may think necessary will be forwarded to all competitors, and form part of these Conditions.

ISSUED BY ORDER OF THE FEDERAL COUNCIL OF  
AUSTRALIAN INSTITUTES OF ARCHITECTS.

JOHN J. LOUGH,

Assistant Secretary.

15th September, 1923

Agreed to by the Assessors.

W. H. BAGOT.

29th September, 1923.



## CORRESPONDENCE

Electricity Department,  
Town Hall,  
City of Sydney,  
New South Wales,  
31st July, 1923.

The Secretary,  
Institute of Architects,  
5 Elizabeth Street, Sydney.

Dear Sir,—

**A.C. Motors—Starting Currents and Power Factors.**

I forward you herewith copy of circular which is this day being sent to Wiring Contractors whose names are recorded in this Department as having worked from time to time on installations in areas in which this Department supplies electricity.

Yours truly,

H. R. FORBES MACKAY,  
per J.F.A.,  
General Manager.

Electricity Department,  
Town Hall,  
City of Sydney,  
New South Wales,  
31st July, 1923.

Dear Sir,—

**A.C. Motors—Starting Currents and Power Factors.**

In June, 1921, I sent out a circular with the above heading. In this circular it was laid down that A.C. motors intended for connection to the mains of the Electricity Department of the Sydney City Council must be of the "wound rotor" type if of over 25 h.p.

I have decided to remove this restriction on the use of squirrel-cage motors. From the above date the connection of squirrel-cage motors to the Department's mains will be approved by me if the starting currents do not exceed those set out in the Department's service rules, which please see.

N.B.—The restriction on the use of squirrel-cage motor is removed because I believe it is interfering with trade. It is not removed because the Department is in a better position to deal with big starting currents than it was. Persons and firms proposing to instal squirrel-cage motors are warned that the starting currents of motors may be closely investigated and the connection of a motor may be refused if the motor is

so installed that the starting current may exceed the limits set out in the service rules.

Yours truly,

H. R. FORBES MACKAY.

per J.F.A.,  
General Manager.

P.S. (Quotation from service rules).

30. Starting Currents of A.C. Motors—Three-phase A.C. Motors.—The maximum starting current as measured by a damped ammeter must not exceed the following:—

Motors not exceeding 2 b.h.p.	12 amps per b.h.p.
Motors exceeding 2 b.h.p., but not exceeding 8 b.h.p.	6 " " "
Motors exceeding 8 b.h.p., but not exceeding 12 b.h.p.	5 " " "
Motors exceeding 12 b.h.p., but not exceeding 25 b.h.p.	4 " " "
Motors exceeding 25 b.h.p.	3 " " "

31. Power Factor of Motors.—The power factor of A.C. Motors at full load must be not less than the following:—

Motors not exceeding 2 b.h.p.	75%
Motors exceeding 2 b.h.p., but not exceeding 8 b.h.p.	80%
Motors exceeding 8 b.h.p., but not exceeding 25 b.h.p.	84%
Motors exceeding 25 b.h.p.	86%

### COMPETITIONS

COMPETITION.	CLOSING DATE.	REMARKS.
Federal Council A.I.A. Bronze Medal	31/10/23	Approved

### EXAMINATIONS I.A.N.S.W.

AND

### F.I.B.A., FEBRUARY, 1924

Time Tables are now available upon application to the Secretary I.A.N.S.W.

Royal Society's House, 5 Elizabeth Street, : : Sydney

## EXAMINATIONS I.A.N.S.W. and R.I.B.A., FEBRUARY, 1924

1924	I. A. N. S. W. Qualifying for Registration as Associate Fee £5 5s.	R. I. B. A. INTERMEDIATE Qualifying for Registration as Student Fee £5 5s.	R. I. B. A. FINAL Qualifying for Candidature as Associate Fee £6 6s.	R. I. B. A. OVERSEAS Qualifying for Candidature as Associate Fee £10 10s.	R. I. B. A. POST WAR SPECIAL Qualifying for Candidature as Associate Fee £10 10s.
February					
Tuesday 19	—	—	Design .. 10-1.30 2.30-5.30	Design .. 10-1.30 2.30-5.30	Design .. 10-1.30 2.30-5.30
Wednesday 20	—	—	Design .. 10-1.30 2.30-5.30	Design .. 10-1.30 2.30-5.30	Design .. 10-1.30 2.30-5.30
Thursday 21	—	—	Design .. 10-1.30 2.30-5.30	Design .. 10-1.30 2.30-5.30	Design .. 10-1.30 2.30-5.30
Friday 22	A Principal Styles and General History of Architecture. 10-1.30 2.30-5.30	A Principal Styles and General History of Architecture. 10-1.30 2.30-5.30	—	—	—
Monday 25	B 1 Simple Applied Construction in elementary de- sign, and the properties and uses of ordinary building materials. 10-1.30	B 1 Simple Applied Construction in elementary de- sign, and the properties and uses of ordinary building materials. 10-1.30	B 1 Construction, including iron and steel con- struction, ferro- concrete, shoring, and underpinning. 10-1.30	B 1 Construction, including iron and steel con- struction, ferro- concrete, shoring, and underpinning. 10-1.30	B 1 Construction, including iron and steel con- struction, ferro- concrete, shoring, and underpinning. 10-1.30
	B 2 Theoretical including Stresses and Strains. 2.30-5.30	B 2 Theoretical including Stresses and Strains. 2.30-5.30	B 2 Construction, do. do. 2.30-5.30	B 2 Construction, do. do. 2.30-5.30	B 2 Construction, do. do. 2.30-5.30
Tuesday 26	C 1 Historical Architecture or C 2 Mathematics and Mechanics 10-2 C 3 Design	C 1 Historical Architecture or C 2 Mathematics and Mechanics 10-2 C 3 Design	C Hygiene, including drain- age, ventilation, heating, light- ing, and water supply. 10-12.30	C Hygiene, including drain- age, ventilation, heating, light- ing, and water supply. 10-12.30	C Hygiene, including drain- age, ventilation, heating, light- ing, and water supply. 10-12.30
Thursday 28	Oral .. 10	Oral .. 10	D Properties and Uses of Build- ing Materials. 1.30-4	D Properties and Uses of Build- ing Materials. 1.30-4	D Properties and Uses of Build- ing Materials. 1.30-4
Friday 29	Oral .. 10	Oral .. 10	E Ordinary Practice of Architecture, including Spec- ifications and the Law of Contracts. 4-5.30	E Ordinary Practice of Architecture, including Spec- ifications and the Law of Contracts. 4-5.30	E Ordinary Practice of Architecture, including Spec- ifications and the Law of Contracts. 4-5.30
			Oral .. 2	Oral .. 2	Oral .. 2
			Oral .. 2	Oral .. 2	Oral .. 2

NOTES—1. Applications, Fees, Certificates, Testimonies of Study, Theses, Problems in Design, etc., must be delivered to the Secretary by 12 noon on Saturday, 19th January, 1924.  
 2. Candidates are advised to send in the Testimonies of Study, etc., as soon as possible, so that if they should not prove to be of sufficient merit others may be prepared.  
 3. Candidates for all Examinations must bring with them Imperial drawing boards, tee and set squares, instruments, drawing pins, etc.; in short, every requirement except writing ink, writing, tracing and drawing paper.  
 4. Candidates must notify the subjects selected for the Theses on or before Saturday, 1st September, 1923.

The Examinations will be held at Sydney Technical College, Harris Street, Ultimo, in the Architectural Department.

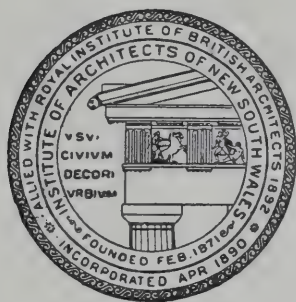
1st June, 1923.

E. O. M. ROWLINSON, Acting Secretary I.A.N.S.W., 5 Elizabeth Street, Sydney.



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



SEPTEMBER 15TH  
1923

VOL 12. No. 9

PRICE ONE SHILLING





# MINUTES OF AN ORDINARY GENERAL MEETING OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Held at The Royal Society's House, 5 Elizabeth Street, Sydney, on Tuesday, 18th. Sept., at 8 p.m.

**Present.**—Sir Charles Rosenthal, President (in the Chair); H. C. Day, Hon. Sec.; and twenty members.

Before commencing the business of the meeting the President took the opportunity of passing a vote of sympathy to Dame Margaret Davidson, in the death of our late Governor, Sir Walter Davidson; he suggested that a formal expression of regret and condolence be forwarded to Dame Margaret and family. He said that no previous Governor had shown a greater appreciation of his high office, or had had such a grasp of the difficulties and problems of our country; his interest and knowledge of Architecture was by no means superficial, and he had shown by his attendance at various functions of the Institute that our profession held a keen attraction for him. He desired to extend sincere sympathy on behalf of members, and moved the following resolution from the Chair:—

"The members of the Institute of Architects of New South Wales desire me to record their deep sense of loss in the death of the late esteemed Governor of New South Wales, Sir Walter Davidson.

"They have much appreciated the personal interest taken by the late Governor in the work of the Institute and the advancement of architecture generally, in this State, as well as his keen interest and personal influence in all matters affecting the welfare of New South Wales and its people.

"They desire to extend to Dame Margaret Davidson and her family most sincere sympathy."

Would you kindly, therefore, accept this resolution as a definite expression of opinion from the architects of this State.

Yours very truly,

Mr. Waterhouse spoke with regret of the passing of Sir Walter; he thought that members should interest themselves and carry on the Soldiers' Memorial so dear to Sir Walter's heart; if they did so it would really mean a memorial to our late Governor; he had shown a remarkable knowledge of architecture, genuine and sincere. He (Mr. Waterhouse) seconded the motion. Carried in silence; all standing.

**Minutes.**—The minutes of the previous meeting (17/8/23) were taken as read and confirmed.

**Apologies.**—Apologies were received from Messrs. A. Spain (Vice-President), H. V. Vernon, J. D. Moore, J. C. R. Mills, Professor Wilkinson, J. Barr, A. Gerard.

**New Member.**—Mr. C. Lemont attended for the first time since his election to Fellowship, and was welcomed by the President.

Sir Charles said, that as this was a business meeting, there would be no adjournment on account of the late Governor.

**Exhibition Committee.**—Members were asked to submit names (including their own, if possible) of men who would be willing to act on and devote the necessary time to this Committee, the Committee to work under the control of Council.

**Visit to Clyde Workshops.**—Members have been invited to visit Clyde workshops (old Standard Waygood Co.) on Thursday, 27th September, the previous arrangement (Thursday, 13th September) was cancelled, owing to the very short notice many members found it difficult to attend. The President hopes that there will be a generous response to the invitation. This progressive Company's works are most interesting from an educational point of view.

**Visit to Canberra.**—An arrangement has been made for members to visit Canberra on Saturday, October 6th. The party will leave Sydney on Friday night, arrive in Queanbeyan early on Saturday morning, motor to Canberra, leaving on the return trip about 9 o'clock and arrive in Sydney on Sunday morning. The Mayor of Queanbeyan will make all necessary arrangements at that end, as regards meals, conveyances, etc. The President hopes that there will be a good attendance of members. The trip promises to be a most enjoyable and instructive one; the cost (inclusive of everything) has been fixed at six pounds (£6/-/-).

**Conditions of Engagement and Scale of Charges.** The President said that the position aimed at is that all Institutes reach common ground. The scale, as adopted by the Federal Council at its meeting in February last, does not coincide with the one in use in N.S.W. Mr. Waterhouse said that the whole thing appears to have got rather muddled; it should be reviewed. It had been passed at the Federal meeting, reported at the General

Meeting which approved its adoption, rescinding all other scales; it was approved, but the Secretary was directed not to issue them until after next Federal Council Meeting, 1924. It seems to be verging on the question "Federal versus State." After a very lengthy discussion, in which Messrs. Kethel, Roberts, Somerville, Scott, Waterhouse and Mrs. Taylor took part, it was resolved, on the motion of Mr. Waterhouse, seconded by Mr. Day, that a copy (proof) be sent to every member of the Institute, asking for it to be read and any anomalies or contradictions be sent (in writing) to the Secretary before the next General Meeting. Carried.

**R.I.B.A.**—Two letters, received by Mr. Godsell, from the President R.I.B.A. were read; conveying friendly greetings to the Institute. The President will reply. The letters will appear in "Architecture."

**Containers.**—The Australian General Electric Co. have supplied the Institute with a container and data of electric lighting of interest to architects. Members are invited to enter their names and the Company will forward these containers to the Institute.

**Parliamentary Buildings, Canberra.**—Mr. Waterhouse said that several designs had already been sent in, he thought that the State institutes should clear up the matter. Would it not be possible for the Government to give all *bona fide* competitors some compensation, Mr. Stewart (Minister for Works) had been sympathetic, so he (Mr. Waterhouse) thought that something might be done. The Federal Government had acted most unfairly.

The President quite agreed that we must not accept things as they are. He thought that a solution might be arrived at by the Institute in every country communicating with R.I.B.A., with a view to exhibitors' work being assessed and compensated accordingly. Mr. Waterhouse said that

assessing in this case would be impracticable. Mr. Kethel said that the competitions conditions made by the Institute give competitors no claim against the promoters; he thought the Government might be compelled to carry out the contract or remunerate men who competed. After a great deal of discussion, in which the President, Messrs. Scott, Roberts, Waterhouse, Grant and Hurst took part, it was decided to pass the matter on to R.I.B.A. and act on their opinion; the President to communicate with the Federal Council in the meantime, with a view to premiums being allotted to competitors *pro rata*. Mr. Louat moved and Mr. Day seconded, that the matter be left in the hands of the President and Mr. Waterhouse. Carried.

**Advertisements.**—Mr. Waterhouse spoke of the way the city is being spoilt by advertisements in all sorts of places—the Railway Station, trams, etc.—and no protest whatever from technical bodies. He thinks the Institute should develop a "Civic Advisory Board" to devise some means of protesting against this encroachment on the beauty of the city. The Railway Commissioners do as they like; there are so many anomalies in the Act. The President said that if the public would voice their opinion they could move anything. It was decided to place this matter on the agenda for next meeting.

**Registration.**—Mr. Buchanan enquired if a list of registered architects has been printed yet. The President said that a list was not yet procurable, because registration has not really been finalised.

**Balance-Sheet.**—Mr. Grant asked if the balance-sheet had been submitted, and was informed that it would be at next meeting.

**Defaulters.**—The Secretary said that we still have about nineteen defaulters on our books. Mr. Scott said that the Articles of Association must be carried out, and the usual procedure adopted.

The meeting terminated at 10.30 p.m.

## ELECTRICAL EXHIBITION IN MELBOURNE

The Electrical Federation (Victoria) has decided to hold an Electrical Exhibition in Melbourne, to take place during September, 1924, and to remain open for a period of at least four weeks.

The Exhibition will be designed to cover every phase of electricity and its uses. It will demonstrate to the public the wonders and powers of electricity in its industrial, military, domestic and other applications. It is hoped to show every known type of electrical application from toys to machinery—in many

cases complete working models of electrical transport, lighting and other industrial systems will be shown. Wireless in all its ramifications will be a feature, both in telegraphy and telephony, and also for distance control.

It is intended to make this Exhibition the biggest and most comprehensive ever held in the Southern Hemisphere. Fuller particulars can be obtained from the General Manager, Edward Perugini, Electrical Federation (Victoria), Melbourne, Australia.



## CORRESPONDENCE

Sydney, 31st August, 1923.

The Secretary,

The Institute of Architects of N.S.W.,  
5 Elizabeth Street, Sydney.

Dear Sir,—

I have been instructed by my Executive to bring before your notice the following facts regarding the work accomplished by the Sydney Regional Plan Convention, since its inception.

As generous supporters of this movement, it is thought that the members of the Institute will be interested in this satisfactory evidence of the progress made:—

Having successfully brought about the inauguration of the Sydney Regional Plan Convention, in November last year, the Sydney Regional Plan Conference handed over the work to the Executive Council, of that body, on the 11th January of this year..

### **The Chairman.**

As it was felt that a prominent citizen should be the Chairman of this important movement, the Hon. Sir H. Y. Braddon, K.B.E., M.L.C., was asked to accept the position, and he agreed to act in that capacity. The movement has greatly benefited by his valued influence and counsel.

### **The Vice-Chairman.**

The election of Mr. Frank Whiddon, as Vice-Chairman of the Executive, has provided a very capable deputy.

### **The Secretary.**

Owing to the resignation of the Secretary, Mr. J. Lough, the work was carried on for some time in an honorary capacity by Mr. R. Keith Harris, who has given splendid service to the Convention. It was found, however, that as the work was encroaching too much on Mr. Harris' professional time, it would be necessary to appoint a paid Secretary. The position was advertised, and out of sixty-four applicants, the present Secretary was selected and appointed on the 29th January last.

### **Office Quarters.**

The Institute of Architects of New South Wales kindly placed their office and committee rooms at the disposal of the Convention, until they were able to find permanent quarters. The Convention has been fortunate in securing, at a moderate rental, suitable offices at No. 80 Hunter Street, with excellent natural light for draftsmen, and ample space for meetings.

### **The Executive Council.**

A very representative Executive Council has been formed, consisting of the following gentlemen:—

The Hon. Sir H. Y. Braddon, K.B.E., M.L.C., Chairman; Messrs. Frank Whiddon, Vice-Chairman; C. A. Le Maistre Walker, C.B.E., Hon. Treas.; and R. Keith Harris, A.I.A., A.R.I.B.A. Hon. Secretary, Representative of the Institute of Architects of New South Wales; Dr. W. G. Armstrong, representative of the British Medical Association; Alderman L. T. Courtenay, representative of the Local Government Association of New South Wales; Alderman W. P. McElhone, M.B.E.; Alderman S. L. Cole, representative of the Master Carriers' Association of New South Wales; Messrs. R. J. Boyd, M.I.E., Aust., E. H. Cowdery, F.I.S., representative of the Institution of Surveyors, W. H. Myers, B.E., M.I.E., Aust.; Colonel Alfred Spain, F.R.I.B.A., representative of the Town Planning Association; Professor L. Wilkinson, F.I.A., F.R.I.B.A., representative of the Institute of Architects of New South Wales; Messrs. N. Chalmers, F.I.S., A.M.I.C.E., H. G. Foxall, B.E., F.I.S., A.M.I.E., representatives of the Institution of Surveyors; G. H. Godsell, F.I.A., representative of the Institute of Architects of New South Wales; A. Howie (Howie Moffat & Co., Ltd.); H. F. Hal-loran, F.I.S., representative of the Town Planning Association; E. Finlay Munro, representative of the Master Builders' Association of New South Wales; W. Poole, B.E., L.S., M.I.C.E., M.I.E., representative of the Institution of Engineers, Australia; John Sulman, F.R.I.B.A., representative of the Town Planning Association; S. Ure-Smith, representative of the Society of Artists; B. J. Waterhouse, F.I.A., H. E. Budden, C.B.E., A.I.A., representatives of the Institute of Architects of New South Wales; A. S. Hook, representative of the Architects' Association of New South Wales; and R. Stanton, representative of the Real Estate Institute of New South Wales.

This Council meets on the first Wednesday in every month at 7 p.m., and the meetings are well attended.

The Administrative Committee, which meet during the lunch hour every fortnight, has done excellent work by dealing with the various details that arise between the Executive meetings, thus saving valuable time, and enabling comprehensive recommendations to be brought forward for the consideration of that body.

**Data Committee.**

The Data Committee, consisting of representative technical men, was formed for the purpose of collecting information regarding contours, building values, population and traffic. This Committee is doing constructive work in connection with the scheming for the plan, and has begun the compilation of a contour map of the city, and a number of the suburban areas, which, it is expected, will be completed in about three months. The various Councils interested have been notified of this important work, and they have expressed their appreciation of the valuable information the Convention is preparing. Offers to supply data and information have been received from a number of the Councils.

**Donations of Maps.**

Mr. H. E. C. Robinson, the well-known map publisher, and a member of the Data Committee, has generously donated various maps, and, in addition, will supply the necessary maps for scheming purposes and contour planning at cost price.

A valuable map of parts of Sydney, Glebe, Woolahra and Paddington has been kindly donated by Mr. Scott Griffiths, Government Town Planner, Adelaide. We are indebted to Mr. H. E. C. Robinson who also helped towards that donation.

**Government Assistance.**

It is very gratifying to be able to report that the Government departments are willingly supplying information that is of great assistance to the Convention. Valuable data has been supplied by the Harbour Trust, Metropolitan Board of Water and Sewerage, the Railways and Tramways, and the Works Department. The Water Conservation and Irrigation Commission have kindly loaned a large drafting table for the use of the draftsmen.

Through the kindness of the present Government, we secured the services of Mr. R. W. Willis, an expert draftsman, to supervise the compilation of the contour map, and other plans which are being prepared.

**"Open Air Spaces."**

The Convention is preparing a special map of the present parks, reserves and available spaces in connection with the scheming to be done with reference to "Open Air Spaces."

**Exhibition of Plans and Photographs.**

In order to arouse the civic pride of the citizens for a more comprehensive development of the city and its surroundings, and to help the work that the Convention is engaged upon, Messrs. Farmer & Co. Ltd., have asked that we assist them to organise

a thoroughly representative exhibition of plans and photographs of the leading cities of the world, at their expense. This generous offer was promptly accepted by the Executive. The Consuls for the various countries have been interviewed, and they are all advising their authorities to assist. A special cable was sent to Mr. Henry Halloran, one of our Executive, who is in London, asking him to collect information as to suitable exhibits, and the Deputy Town Clerk (Mr. W. G. Layton) has promised to interview various organisations in Great Britain and interest them in this project. Messrs. Farmer & Company Limited have placed their fine exhibition hall at our disposal, and every effort is being made by both they and our Executive to assure the success of the function.

It is interesting to note that the first contribution to this exhibition is a copy of a plan, of a proposed "City of Jerusalem Town Planning Scheme," contributed by the British and Foreign Bible Society, who have acquired a site there.

**Conferences.**

The assistance of the Convention has been asked for in connection with various Conferences. We were invited to co-operate with the recent Motor Bus Traffic Conference, and Mr. H. G. Foxall represented the Convention at that Conference. At the request of the Lord Mayor, two delegates, Messrs. F. Cridland and H. G. Foxall, attended the Bridge Traffic Conference, held on 31st May last; and two delegates, Messrs. H. E. C. Robinson and J. H. Cardew attended the "Contour Plan" Conference, held at the Town Hall on the 27th June last.

**Finance.**

The finances of the Convention are at present sufficient for our immediate needs, thanks to the generous support of many of our public spirited citizens, who have shown their confidence in this movement in such a practical manner. We are confident that, when the valuable and satisfactory results of our efforts are demonstrated, there will be no difficulty in obtaining more funds, should they be required.

It is the aim of the members of the Convention to see that the foundation work is carefully prepared, and every effort is being made to make the best possible use of the funds which have been placed at their disposal.

At present the work affords very little opportunity for spectacular publicity, but when it is remembered that all pioneering work is slow and laborious—particularly so in this case—it will be readily understood that what has already been



accomplished is a step in the right direction, and is evidence of the earnest efforts of the Convention to faithfully carry out the work which has been committed to their charge.

Progress will be reported from time to time, and we are certain that it will more than justify the

confidence of those who have so liberally and wholeheartedly supported the movement.

Yours faithfully,

HAROLD K. RILEY,

Secretary.

## BRITISH EMPIRE EXHIBITION

### AUSTRALIAN ART SECTION

#### Notice to Architects, Sculptors, Artists and Collectors.

The Empire Exhibition Commission invites architects, sculptors, artists, and collectors to lend Works of Art, as defined hereunder, for exhibition at the above Exhibition, to be opened in London in April, 1924.

The following classes of work will be admitted:—

- (1) Architectural engineering drawings and models.
- (2) Sculpture, modelling, and carving.
- (3) Paintings in oil, watercolours, or other mediums.
- (4) Black and white drawings, etchings, wood-blocks, and lithographs (not commercial work).
- (5) Applied arts and crafts.
- (6) Artistic photography.

All work shall be the original work of Australian artists, produced in Australia. *Only work of the highest standard of art will be accepted.* Works intended for exhibition shall be delivered at the

National Art Gallery of New South Wales, Sydney, free of expense to the Commission, on or before the 1st day of November, 1923, for the purpose of pre-selection. The following information must be attached to each exhibit:—

- (a) Title of exhibit.
- (b) Name of artist.
- (c) Name and address of owner.
- (d) Reasonable value for insurance.
- (e) Price, if for sale.

**Expenses.**—All reasonable expenses, including insurance, packing and freight, will be borne by the Commission after final selection. This includes freight to and from London, insurance during the time that the works are absent from Australia.

Paintings, watercolour drawings, etchings, and black and white works should be suitably mounted and framed. Architectural drawings must be suitably mounted, but not necessarily framed.

**Size of Works.**—Owing to the limited space in the Art Section, it is desired that no very large pictures or drawings (beyond, say, five feet by three feet) be submitted.

The control of exhibits and their display shall remain in the hands of the Commission during the period of the Exhibition, and no exhibit shall be withdrawn except with the permission of the Commission.

G. V. F. MANN,

Director,

National Art Gallery of N.S.W.,  
Sydney.

F. C. GOVERS,

Executive Secretary,

N.S.W. State Commission, B.E.F.,  
University Chambers,

### COMPETITIONS

COMPETITION.	CLOSING DATE.	REMARKS.
Federal Council Bronze Medal	A.I.A. ... 31/10/23	Approved

### EXAMINATIONS I.A.N.S.W.

AND

### F.I.B.A., FEBRUARY, 1924

Time Tables are now available upon  
application to the Secretary I.A.N.S.W.

Royal Society's House, 5 Elizabeth Street, : : Sydney

## CITY OF SYDNEY—CITY PLANNING TRAFFIC PROBLEM

(By Mr. Norman Weekes, City Surveyor.)

78 Elizabeth Street,  
Sydney.

The acute problem of traffic congestion and the distress inevitably entailed by extensive resumptions led me to consider if there was not some alternative solution, such as by re-direction of traffic and parking of standing vehicles in less important areas.

The Bridge Head problem and two or three other inter-related proposals for dealing with traffic, at present before the City Council, have precipitated the need for a co-ordinating plan, but I cannot too strongly emphasise that, in my opinion, the subject is worthy of more earnest, careful and deliberate consideration so that when action is taken in any one respect, it can be shown to be the result of careful regard to the problem as a whole, and to all the influences bearing upon the development of a city of such international eminence, national characteristics and commercial importance as the city of Sydney.

I have endeavoured to present, not a conclusive scheme, but a plan which represents a practicable basis for discussion co-ordinating on the one hand the dreams of visionaries and on the other the ideas of a limited outlook.

With regard to the incidental features of the scheme now outlined, the open formation of streets proposed at the Bridge Head is in accordance with the accepted fundamental principle of City Planning, that wherever there is an unavoidably congested stream of traffic, such as in this instance at the Bridge, the first essential is to provide ample facilities for dispersing this traffic with the least inconvenience and then by well directed arterial routes carrying the through portion of the traffic clear of the city and from the same routes to distribute the local portion separately.

The open formation of streets at the Bridge, however, is not a new idea of my own; Alderman Milner Stephen has already voiced it and it has evidently been in Mr. Bradfield's mind for some time.

Admittedly, on the outer circle road the grades are not easy, but the facilities provided are not without value, particularly to pedestrian traffic. The pivotal point of the Bridge traffic justifies the maximum open space with buildings of a monumental character, such as public and ecclesiastical and other edifices.

Hence, while the removal of St. Andrew's Cathedral is not contemplated as essential to the scheme, one cannot resist the thought of what an admirable opportunity is here afforded to erect a magnificent structure on an island site adjacent to St. Phillip's Church, hallowed by old associations and dedicated to Angli-

can traditions. Some equally public building might be correspondingly erected on the other side of Clarence Street.

Another interesting feature might be the new Scot's Church, which if built on the site or in the vicinity of the present Church, must appeal to the sentiment of its followers. For instance, if built with a frontage to York Street and extended from Jamieson Street to Margaret Street, its first floor bridging Margaret Lane, it would present opportunity for a fine auditorium for Church services, and on the ground floor provide school rooms and office accommodation worthy to be the headquarters and centre of denominational activities.

Again St. Patrick's (R.C.) Church would acquire the enhanced dignity which an island site invariably affords to monumental buildings, either public or ecclesiastical.

Apprehension need not be felt about Wynyard Park, no more being intended there than to utilise the footpath within the park and incorporate the present footpath in the road surface.

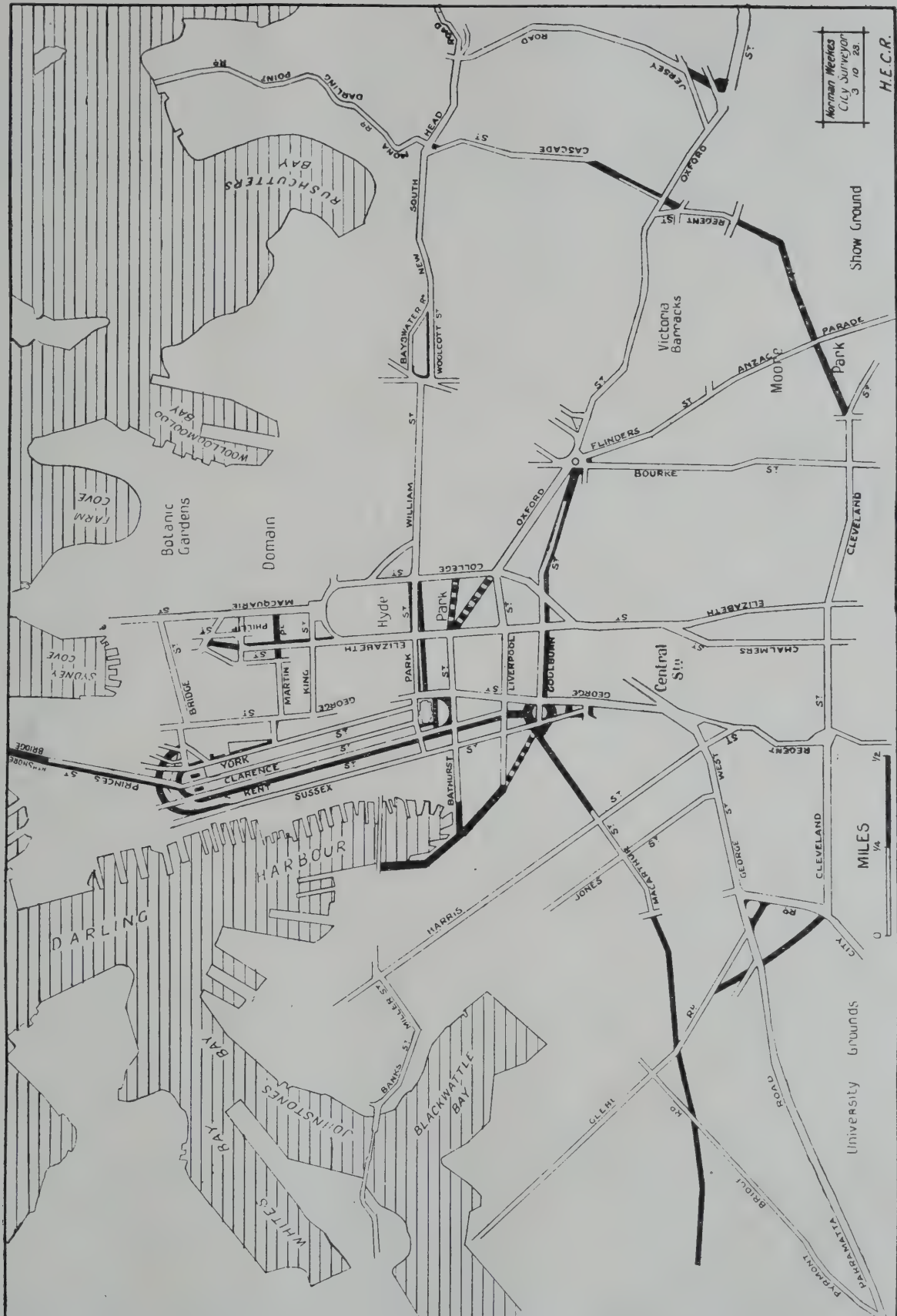
Some additional facilities are suggested in Wynyard Street for access to Martin Place, but it cannot be conceived that with such a fall and rise to Macquarie Street this could ever be seriously contemplated by vehicle users as a traffic route to the eastern suburbs, when there would be better facilities through the Town Hall Square.

The Bridge traffic must still remain largely problematic, but on more deliberate investigations it may appear desirable to widen one of these avenues leading from it, in which case Kent Street is undoubtedly the one to be widened for two reasons; that it will be the most direct, and at present, the least congested route to the new main traffic centre, at Goulburn Square, and secondly that resumption on the west side would entail the least business disturbance and the least cost for resumption. It may be added that one additional traffic way can be obtained as it is by reducing the width of the footpath. A 12 feet footpath is admirable, but there are cases where it may be too little and others where it may be too much, for instance, in a wholesale business street it takes only one man to spend an amount which in a retail shopping area would throng the street.

With regard to a roading, this, with specially designed buildings can be a beautiful feature architecturally, but is apt to be a dismal failure where the buildings have not been designed for it.

The outstanding feature of the scheme is the fact that the net cost should be comparatively nothing.





The land is in most cases already owned by the Government or City Council, and where this is not the case, for instance, in new Goulburn Street traffic centre, which is put forward as the junction of the north-south and east-west traffic, the very valuable frontages created would compensate for necessary resumption, while the high level viaduct to Macarthur Street would afford valuable storage accommodation, where it is most required, namely, the Market and Dock area, the revenue would, I believe, make it an economical proposition apart from its function as a roadway above.

With regard to the Park Street widening proposal, this again is not essential to the scheme, but it seems a desirable traffic route to the eastern suburbs as likely to bring a greater number of people in contact with the extensive recreational reserves, the amenities of which, are so highly valued by the people of Sydney. This is, perhaps, the most expensive feature, and it is not emphasised more than to show that if anything at all is done what is proposed is the only adequate solution.

It may be mentioned that a road through a park takes nothing appreciably from it, and not only adds to its charm, but brings a greater number of people into contact with its amenities.

The vista of William Street eastwards might be closed at Victoria Street with premises of a monumental character, and Bayswater Road and Woolcott Street used as alternative one-way traffic streets, and anyone who has had to change gear or re-start a horse half way up the hill will appreciate the advantage of not having to slow down to meet oncoming traffic.

For east bound Darling Harbour traffic, Bathurst Street and Liverpool Street, used as one-way traffic streets, would probably suffice without further resumptions, but failing this the Darling Harbour route to Liverpool Street might be practically extended to Goulburn Street, and the necessary resumptions in which should be taken fuller advantage of, and avoid resumption in Bathurst and Liverpool Streets.

Any one who has witnessed the use made of Wynyard Square during mid-day hours or a similar square in the business centre of almost every commercial city of the world, will appreciate the value and the need of open spaces of this nature, such as now suggested in the Town Hall Square and new Goulburn Street Square.

A large open space is proposed at the junction of Goulburn Street and Kent Street, to accommodate main north-south and east-west traffic. It will be observed how usefully this tends to re-direct the present and anticipated traffic to the relief of George Street

at its busiest portion. This, I regard, as the pivot of the traffic of the city.

The west bound traffic along Macarthur Street would be *via* a new road which I have presumed to suggest for the Glebe, connecting up with the existing arterial highway through Annandale and Leichhardt. George Street would, by this route, be relieved of much of the traffic which could go *via* Pyrmont Bridge Road and enter Parramatta Road at Camperdown.

The east-bound traffic *via* a widened Goulburn Street would again radiate from what must constitute an important traffic centre at Taylor Square, and similarly further east at Oxford Street Square, also an important traffic centre.

The whole object of this decentralised traffic circulation points is to distribute the traffic over a number of radial thoroughfares and thus contribute to the convenience of traffic requirements and eliminate congestion by using the existing road to the maximum before engaging upon resumptions to relieve particular roads.

Perhaps the most interesting feature disclosed by this outlined scheme, is how very little is required to complete a circumferential route which is invaluable from a traffic point of view, because traffic converging upon such a belt route can be automatically marshalled in the direction most convenient to its objective. I refer to Glebe Road, Cleveland Street, across Moore Park and the Sports Ground, Regent Street, William Street, Glenmore Road, Mona Road, Darling Point. That little consists of less than one-tenth of the whole route, and through what is already open ground in circumstances where its value to that particular ground, merely the Sports Ground, is beyond price.

It is, perhaps, beyond the economic objective of the present proposition although practically possible to convert this into a magnificent boulevard not less than 200 feet wide, connecting up existing parks. Such a possibility has, however, been made practicable, and has been constructed in many other cities in the face of equal, and perhaps, greater difficulty.

A more visionary scheme, although equally worth consideration, would be a second boulevard 500 feet wide, starting from Callan and Leichhardt Parks, through Leichhardt, Newtown and Alexandria, picking up Victoria Park racecourse, Randwick racecourse, Queen's Park to Rose Bay, while there is yet time to acquire the land, and I am sure that such a scheme must appeal to the municipalities through which it passes.

The virtue of such a proposition is that until such times as it is necessary to carry out the work, it need



not cost anything more than the reservation of the land at the period when it is cheapest.

There are few cities in the world who have not had cause to regret neglecting to take advantage of similar possibilities.

When it is remembered that upon a solution of the traffic problem and general development of New York City and environs, there is now sitting an Advisory Committee of the ablest City Planners in the world, with before them statistical information with regard to the influences bearing upon the problem which an equally able man with a large staff has been compiling, regardless of expense, for the last three years, it will be realised how impossible it is for me on so short an acquaintance with this city to do more than outline principles upon which, I believe, a solution may be founded.

In Paris, I understand, there has just been voted £100,000,000 for re-development indicating what other capital cities are doing.

Just as vehicular and pedestrian traffic represents liquid humanity so movements expressed in human activity is of a fluid nature, and before any extensive schemes are put into operation, it is necessary to study the tendencies of development, for instance

almost imperceptibly industrial activity extends in a new direction, residential tendencies lean in another direction making sometimes nothing but huge dormitories of areas.

Transport, that is rail or arterial road facilities, also sway the movement of humanity in one way and another. Other influences, such as physical configuration of the land and climatic conditions equally have an influence on city development.

My present objective is not to claim originality for any particular scheme, but to so co-ordinate the helpful suggestions of those who have the welfare of the city and its developments so much at heart, and who are experts in their respective directions, as will find an immediate practical solution of the problems requiring immediate attention, and at the same time, to focus attention on the wonderful possibilities of a more comprehensive scheme of city planning.

Concluding, it may be pointed out that these city developments in other parts of the world, which excite universal admiration, have been achieved only by subordinating individual interests to the common good. Sometimes this has been by self-discipline and other times enforced, but in either case the principle is an absolutely essential preliminary to any success.

29th September, 1923.

---

## SYDNEY HARBOUR—NORTH SHORE BRIDGE

### CITY OF SYDNEY—TRAFFIC EVOLUTION

**Tentative Proposal**—with the underlying basic principles of city planning.

(1) That incoming traffic be directed by arterial routes clear of the city proper, from which the local portion can radiate separately, and the through portion, directed out of the city through arterial radiating centres, both tending to eliminate congestion.

(2) That traffic should be projected upon a square or circular open spaces rather than on a point, and radiate therefrom in order to avoid congestion.

Sydney appears already to have an abnormal street area and to require relief by traffic direction rather than street widening with standing vehicles parked in steep graded unusable side streets or special "parking" areas.

#### Traffic Routes.

*North-South Route*—South Bridge Head—Radial formation of streets—park area—fronted by new Cathedral or other public buildings, architecturally of a monumental character.

Through traffic—*via* York, Clarence, Kent and Sussex Streets (now perhaps wide enough) to Goulburn (new) Square, radiating south-east, south and south-west.

Local traffic—*via* Wynyard, King, Market and Park Streets.

*North-East Route*—*via* Town Hall Square, Park and William Streets.

*North-South-East Route*—Town Hall Square. Bathurst Street, Hyde Park, College Street, Oxford Street.

*East-West Route*—Oxford and College Streets, Hyde Park, Bathurst Street and Reclamation Road (Darling Harbour shipping), also *via* Liverpool Street.

Bathurst and Liverpool Streets alternative "one-way" traffic only.

*Main East-West (Suburban) Route*—Oxford and Flinders Streets, Taylor Square, Goulburn Street (widened), High Level Road, Macarthur Street to Glebe and Pyrmont Bridge Roads, as planned.

Traffic to and from southern arterial routes projects upon inner and outer circumferential routes as under:—

Inner—Macarthur, Goulburn, Oxford Street.

Outer—Glebe Road and Cleveland Street.

The development of these circumferential routes may be usefully considered.

# SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS

## AND THE 44 HOUR PROCLAMATION

TABLE OF HOURS, WAGES, ETC.

Trade.	Country. 48 hours.	City and Suburban. 46 hours.	Date when takes effect.
Bricklayers ..	2/3½	2/4¾	June 22, 1923
Builders' Labourers— (State) .. ..	1/11½	2/0½	" "
(Federal 44 hrs.)	—	2/3	Aug. 3, 1923.
Carpenters and Joiners .. ..	2/2	2/3½	June 22, 1923
Wharf Carpenters	2/2¾	2/4	" "
Plumbers ..	2/2	2/3½	" "
Slaters .. ..	2/3½	2/4¾	" "
Plasterers .. ..	2/3	2/4¾	" "
	44 hours.	44 hours.	
Painters .. ..	2/2 11	2/2 11	June 8, 1923
		40 hours.	
Quarrymen ..	2/3¾	2/6½	May 25, 1923
Masons .. ..	2/5½	2/8	" "
	Hours.	Wages.	
Electrical Mechanics	48	2/1¾	Nov. 24, 1922
Railway, Roads, Bridge, etc., Labourers .. ..	48	1/10 and upwards	May 18, 1923

Trade.	Country. Hours.	City and Suburban. Wages.	Date when takes effect.
Crane Drivers (Agreement) ..	48	2/7¾	Aug. 21, 1923
Hoist Drivers ..	48	2/4¾	" "
Builders' Carters	48	£4/4/6	May, 25, 1923
Machinists (Gen. Joiners) .. ..	44	£5/3/-	July 27, 1923
Machinists (Labourers) ..	—	£4/7/-	" "

### Price of Materials.

Bricks (Common) at kiln, per 1,000 ..	72/-
Cartage of bricks to site (as per current rate)	
<b>Timber (Basic Prices)—</b>	
Hardwood, per 100ft. sup. ..	33/-
Oregon .. ..	35/-
Redwood .. ..	70/-
New Zealand White Pine and Rimu (6in. wide)	47/-
Richmond River or Hoop Pine ..	57/-
Cement, per three bags, according to quantity 20/- to 22/6	

## INSTITUTE LIBRARY

### Library Rules for Borrowers.

1. If a book is lost or stolen from a borrower, or if the same is not returned by him within fourteen days, from the date of issue, he shall replace it, or pay to the Council the full value of such book. In case of the book being part of a set or series, and the borrower neglecting to return the same within fourteen days as aforesaid, or being unable to replace the same, in consequence of its having been lost or stolen, he shall pay to the Council the full value of the whole set or series.

2. A borrower shall keep the books borrowed by him from the Library clean and in good condition, and shall not tear, nor turn down the leaves, nor mark, nor deface, damage, or injure the book in any way.

3. If a book is torn, damaged, marked, defaced, or injured while lent to a borrower, such borrower shall, within one week of notification from the Council, replace the book, or pay to the Council the full value

of the book; or, in case it is part of a set or series, and he shall not replace the said book, the full value of the whole set or series.

In cases where the book is replaced the borrower shall be entitled to the injured book.

4. A borrower shall be entitled to borrow only one book at a time, but at the discretion of the Council two volumes of one work may be issued at the same time.

5. A borrower shall return any book borrowed at the latest within fourteen days after the date of issue; but books may be renewed upon application at the discretion of the Council.

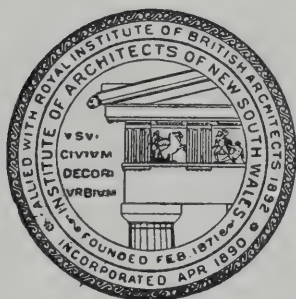
6. If a book is not returned within the time prescribed by the preceding rule, the borrower shall pay the sum of sixpence for each and every day the book is retained beyond the prescribed time.

7. Certain volumes may not be removed from the Library, and are for reference only.



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



OCTOBER 15TH  
1923

VOL 12. No. 10

PRICE ONE SHILLING





# MINUTES OF AN ORDINARY GENERAL MEETING OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

Held at the Institute's Rooms, 5 Elizabeth Street, Sydney, on Thursday, 25th October, at 8 p.m.

Apologies were received from Mr. Somerville, Mr. Peddle, and Colonel Vernon.

Minutes of previous meeting were read and confirmed.

A report was received from the Treasurer, that the Auditors had examined the Accounts, but that the balance-sheet was not yet completed.

Correspondence was read from:—

- (a) Royal Colonial Institute, inviting members of this Institute to be present at a lecture to be given by Mr. W. H. Ifould, on October 30, at 4.30 p.m., in the Royal Colonial Institute's Hall.
- (b) From Mr. N. Breden, Comptroller of Corporation Assets. The following is a copy:—  
(COPY.) Town Hall,  
Sydney, 22nd Oct., 1923.

The Secretary,  
Institute of Architects,  
5 Elizabeth Street,  
Sydney.

## Competition for Workmen's Dwellings:

Dear Sir,—

I have pleasure in notifying you that the adjudication of the competitive plans for Workmen's Dwellings at Way's Terrace, Pyrmont, and Dowling Street, has been completed, and awards made as follows:—

### Way's Terrace:

- First place: Professor Wilkinson and J. C. Fowell.
- Second place: Messrs. Burcham Clamp & Mackellar.
- Third place: Mr. John Crust.

### Dowling Street:

- First place: Messrs. Peddle & Thorp.
- Second place: Mr. John Crust.
- Third place: Messrs. Peddle & Thorp.

A public exhibition of the designs submitted by all competitors will be held in the Basement of the Town Hall, on Friday, 26th, and Monday, 29th October, instant, and I shall be glad if you will have a notice to this effect exhibited in the Institute's Rooms.

I wish to convey, through you, my personal thanks to the Institute for the cordial assistance given in the carrying to a successful issue these competitions.

Yours faithfully,

(Sgd.) J. NEALE BREDEN.

The President reported that action was being taken with a view to obtaining some necessary amendments to the City Council Building Regulations.

Mr. Lindsay Thompson considered that the Institute should be represented on the City of Sydney Improvement Board, which was to be appointed under the City Improvement Act, and stated that he would formally move a resolution to that effect at the next meeting.

The President drew the attention of members to the splendid work of General Sir John Monash, G.C.M.G., during the War and since his return to Australia, and stated that it was proposed to give him a Public Reception at the Town Hall, on MONDAY, 12th NOVEMBER, expressing a hope that members would not only make it their particular business to attend themselves, but to induce all their friends to do likewise, to render to such a distinguished soldier and citizen that General Sir John Monash had proved himself to be, the honour he so richly deserved, but which he (the President) considered had, to some extent, been previously withheld. The President prefaced his remarks by saying, that although it was not strictly an Institute matter, he looked upon General Sir John Monash, in his engineer's capacity, as allied to this Institute.

## New Members.

Messrs. Bennett-Dobson, Kirribilli, Sydney; and John Boyd MacDonald, Macquarie Street, Dubbo, were unanimously elected Fellows of this Institute.

## Scale of Charges.

Discussion took place on the Proposed Scale of Charges and abridged Professional Practice, and some amendments were proposed. It was resolved that all amendments should be referred back to the Practice Committee, who originally compiled the new Scale, to enable them to obtain proper legal opinion as to the new wording.

The President declared the meeting closed at 10.15 p.m.

## SILICATE OF SODA FOR WATERPROOFING CONCRETE

THE action of our P. 84 Silicate of Soda depends upon the fact that when a dilute solution of this Silicate is applied to a concrete surface it is absorbed into the pores of the concrete and forms an insoluble compound which renders the concrete more dense.

The action of Silicate differs from such integral treatments as the use of hydrated lime mixed with cement, and it differs from the purely surface treatments with bituminous products because the Silicate actually enters the concrete near the surface and combines with lime and basic calcium silicates which are present.

The concrete must be clean and dry before treatment so as to ensure penetration; and the Silicate solution used must be dilute.

It is recommended that four or five coats be given, using a very dilute solution for the first coat, made by adding five volumes of water to one volume of P. 84 grade Silicate.

For the final coats a rather stronger solution may be used by diluting one volume of our P. 84 grade Silicate of Soda with three volumes of water.

Concrete building blocks may be treated by immersing them in a dilute Silicate solution—such treatment making them both harder and more dense and so more damp-proof.

**Dust-Proofing and Hardening Concrete Floors, etc.**—Many substances used for hardening and dust-proofing floors act as protective coatings, and do not re-act upon the concrete. Some of the proprietary articles sold for this purpose consist of oils, soaps or varnishes, and come under this heading.

Treatment with Silicate of Soda is effective because an actual chemical reaction takes place in the surface layers of the concrete and insoluble impervious compounds are formed.

In order to obtain good results it is necessary that the Silicate should be sufficiently dilute to penetrate into the pores of the concrete, and it is important that the floor to be treated should be as clean as possible, free from grease, and dry, otherwise proper penetration cannot take place.

One of the great advantages of the Silicate treatment is that, if the concrete is clean before the Silicate is applied, the surface is not rendered slippery.

To facilitate the process, the solution of Silicate should be dilute, and we recommend the use of a solution made by adding one gallon of our P. 84 grade to four gallons of water.

The procedure for treatment of concrete floors is as follows:—The floor should be washed and allowed to dry and the diluted solution of Silicate should then be brushed over the floor as economically as possible—a soft broom being used for the purpose. The floor should then be allowed to dry for 24 hours, and any excess of Silicate should then be removed with a damp mop—the floor being again allowed to dry. This process should be repeated three times.

Our P. 84 grade is of quite a different character from the ordinary alkaline waterglass of commerce, as used for egg-preserving.

For quick work, the floor may be treated with only one coat of a solution made by adding four volumes P. 84 grade to one volume of water.

We do not, however, recommend this shortened treatment, since the Silicate cannot penetrate the floor properly, unless a very dilute solution is used.

It will be understood that the amount of Silicate solution required depends largely upon the porosity of the floor, but we have found that this figure—namely, one gallon of our P. 84 and four gallons of water per 1,000 square feet of floor for one coat, can be taken as an average figure for the consumption of Silicate.

The American Bureau of Standards carried out tests with Silicate of Soda on concrete floors, and the report received is that after two years and two months' hard service, the surface was very hard and showed no signs of wear. The treatment gave uniform appearance which was lighter than the original, and that it effectively stops dusting.

**Concrete Roads.**—Very satisfactory results have been obtained by treating the surface of newly laid concrete roads with our P. 84 grade Silicate of Soda.

Even when great care has been taken over the choice of materials the surface of a concrete road is bound to be more or less porous, and treatment with Silicate of Soda can be thoroughly recommended.

The dilute Silicate solution penetrates the road surface to a depth of possibly half an inch, and crystalline compounds, formed near the surface, fill up the voids and render the concrete more dense.

A binding action results, and this prevents abrasion.

As explained under the heading of concrete floors, the road surface must be clean and dry before treatment, and the Silicate of Soda used must be dilute (one gallon of our P. 84 grade to four gallons of water), in order to ensure penetration.

It is recommended that the Silicate should be applied as economically as possible through the rose of



a watering-can, and that it should then be brushed over the surface with a soft broom.

Newly laid concrete should not be treated for about a fortnight after laying.

Silicate treatment is cheap and easily carried out, and *does not render the surface of the road slippery.*

Another use has been suggested in connection with concrete roads—*viz.*, treating the surface with a comparatively strong Silicate solution immediately after the initial set has taken place. For concrete to set properly, moisture must be retained in it, and the usual practice is to cover the surface of a concrete road with sand as soon as the concrete has set, keeping this sand wet, so as to retain the moisture in the concrete.

If water and sand are scarce, treatment of the freshly laid concrete with Silicate solution would certainly prevent evaporation, but it is possible that the presence of Silicate during the first few days of a set will interfere with the normal reaction which takes place in the concrete. For this reason the best results, from the point of view of hardening the surface, are obtained by treating the concrete after about a fortnight has elapsed.

**Waterproofing Concrete.**—A considerable amount of literature has been published upon waterproofing treatments for concrete. The processes used may, for the most part, be divided up into two classes—*viz.*, integral treatments and surface treatments.

Treatment with Silicate of Soda cannot be placed in either of these classes, as, in its method of application, it is a surface treatment, but as a result of this surface treatment chemical reactions take place near the surface of the concrete and form a more or less impervious layer actually in the concrete itself.

It is important that Silicate solutions should be very dilute for the first application, about five volumes of water to one volume of our P. 84 grade Silicate being used.

It has been recommended that all reinforced concrete oil tanks should be given a treatment of Silicate of Soda when first built.

The procedure in treating a concrete tank is to wash the surface with a solution made by adding five volumes of water to one volume of P. 84 grade Silicate, taking care that the surface of the tank is dry before the Silicate is applied.

After a period of 24 hours, or such time that the inside of the tank has again been allowed to dry, the treatment is repeated. Four or five coats can be given in this way, until it is found that the concrete no longer absorbs the Silicate solution.

Emphasis is laid on the fact that treatment of a concrete surface with Silicate of Soda gives entirely different results from those obtained with Silicate of Soda as mixed with the gauging water when laying the concrete.

The latter process is not recommended, unless it is desired, for some particular purpose, to obtain a very quick setting concrete, and in this case the addition of a small amount of Silicate to the gauging water provides a very convenient means of controlling the speed of setting of the concrete.

The foregoing particulars have been supplied by Mr. F. Poole, Assistant Manager for Australasia, Brunner, Mond & Co., Ltd.

---

## SUGGESTIONS GOVERNING THE PROFESSIONAL CONDUCT AND PRACTICE OF ARCHITECTS AS REVISED BY THE R.I.B.A.

**A**N Architect in practice, if a Member or Licentiate of the R.I.B.A., is governed by established customs accepted and observed by the architectural profession, and more particularly by the Charter and Bye-Laws of the Royal Institute, which render him liable in the case of unprofessional conduct to reprimand, suspension or expulsion at the discretion of the Council.

The following may be considered to record in a general way the practice of architects and also to indicate a standard of conduct in any special cases not specifically referred to therein.

1. An Architect is remunerated solely by his professional fees and is debarred from any other source of remuneration in connection with the works and duties entrusted to him. It is the duty of an Architect to uphold in every way possible the Scale of Professional Charges adopted by the Royal Institute. An Architect must not accept any work which involves the giving or receiving of discounts or commissions, nor must he accept any discount, gift or commission from contractors or tradesmen, whether employed upon his works or not.

2. If an Architect own, or have a commercial interest in, any material, device, or invention used in building he must inform his client thereof, and must obtain his sanction before permitting it to be used in works executed under his direction.
3. An Architect must not publicly advertise nor offer his services by means of circulars. He may, however, publish illustrations or descriptions of his work, and exhibit his name on buildings in course of execution (providing it is done in an unostentatious manner) and may sign them when completed.
4. An Architect must not attempt to supplant another Architect nor must he compete with another Architect by means of a reduction of fees or by other inducement.
5. In all cases of dispute between employer and contractor the Architect must act in an impartial manner. He must interpret the conditions of a contract with entire fairness as between the employer and the contractor.
6. An Architect must not permit the insertion of any clause in tenders, bills of quantities, or other contract documents which provides for payment to be made to him by the contractor (except for duplicate copies of drawings or documents), whatever may be the consideration, unless with the full knowledge and approval of his client.
7. An Architect should not take part in any competition as to which the preliminary warning of the Royal Institute has been issued, and must not take part in any competition as to which the Council of the Royal Institute shall have declared by a resolution published in the *Journal of the Royal Institute* that Members or Licentiates must not take part because the conditions are not in accordance with the published Regulations of the Royal Institute for Architectural Competitions.
8. An Architect must not act as Architect or joint Architect for a work which is or has been the subject of a competition in which he is or has been engaged as Assessor.
9. It is desirable that in cases where the Architect takes out the quantities for his buildings he should be paid directly by the client and not through the contractor, except with the previous consent of the client.
10. The businesses of auctioneering and house agency are inconsistent with the profession of an Architect.
11. An Architect must not accept an appointment in any commercial firm in which the extent of his remuneration is affected by the profits of the firm.

## SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS AND THE 44 HOUR PROCLAMATION

TABLE OF HOURS, WAGES, ETC.				
Trade.	Country. 48 hours.	City and Suburban. 46 hours.	Date when takes effect.	
Bricklayers ..	2/3½	2/4¾	..	June 22, 1923
Builders' Labourers— (State) .. .. .	2/0½	2/1½	..	Oct. 12, 1923
(Federal 44 hrs.)	—	2/3	..	Aug. 3, 1923
Carpenters and Joiners .. .. .	2/27½	2/4	..	Oct. 12, 1923
Wharf Carpenters	2/3½	2/47½	..	" "
Plumbers .. ..	2/27½	2/4	..	" "
Slaters .. .. .	2/3½	2/4¾	..	June 22, 1923
Plasterers .. ..	2/3	2/4¾	..	" "
Painters .. .. .	44 hours. 2/2 11	44 hours. 2/2 11	..	Oct. 12, 1923
Quarrymen .. ..	2/3¾	2/6½	..	May 25, 1923
Masons .. .. .	2/5½	2/8	..	" "
Electrical Mechanics	48	2/1¾	..	April 27, 1923
Railway, Roads, Bridge, etc., Labourers .. ..	48	1/10 and upwards	..	Oct. 12, 1923

Trade.	Country. Hours.	City and Suburban. Wages.	Date when takes effect.
Crane Drivers (Agreement) ..	48	2/8½	.. Sept. 21, 1923
Hoist Drivers ..	48	2/5½	.. " "
Builders' Carters	48	£4/7/6	.. Oct. 12, 1923
Machinists (Gen. Joiners) .. .. .	44	£5/3/-	.. July 27, 1923
Machinists (Labourers) .. ..	—	£4/7/-	.. " "

### Price of Materials.

Bricks (Common) at kiln, per 1,000 .. .. .	72/-
Cartage of bricks to site (as per current rate)	
<b>Timber (Basic Prices)—</b>	
Hardwood, per 100ft. sup. .. .. .	33/-
Oregon .. .. .	35/-
Redwood .. .. .	70/-
New Zealand White Pine and Rimu (6in. wide)	47/-
Richmond River or Hoop Pine .. .. .	57/-
Cement, per three bags, according to quantity	20/- to 22/6



# THE BIRMINGHAM CIVIC SOCIETY

## Excerpts from Report.

**I**N 1890 (twenty years before the first Civic Society appeared in England), the first Municipal Art Commission was established at Boston, U.S. It is not implied by this comparison of dates that the first stirrings in this phase of Civic Consciousness in England were twenty years behind those of America. The somewhat tardy employment of Civic Societies here is partly explained by our activities in other sections of civic awakening, and partly by our national psychology, which is not easily moved to corporate expression in matters of this kind.

2. The first such Commission appears to have been established by a Boston Law of 1890, which authorised the setting up of a jury to which all works of Art for municipal ownership must be submitted for approval before acceptance. This experiment in the legal control of amenity was wisely restricted to particular classes of work of Art, and made no attempt to influence the character of design in structure.

3. The next step in the same direction, and on a similarly experimental basis, was taken by the city of Baltimore in 1895. The Mayor, and seven members representing local cultural bodies, being elected to serve as Commissioners for the purpose of controlling the erection of statues, fountains, arches, monuments or memorials of any kind to be erected in any public place or municipal building, or any variation in any such existing works.

4. Boston enlarged its powers in 1898, when it was provided that the Commissioners should be five in number, appointed by the Mayor from lists supplied by selected Art groups. The time of service to be for five years, and a change of personnel to be made each year by the automatic retirement of one member. Power of vote was taken upon all municipal paintings, mural decorations, statues, bas-reliefs, sculptures, monuments, arches, ornamental gateways and other structures of a permanent character intended for ornament or commemoration, all of which had perforce to obtain the sanction of the Commission before acceptance. The Commission also acted, when requested by the Mayor or the City Council to do so, with respect to "any municipal building, bridge, approach, lamp, ornamental gate or fence, or other structure erected or to be erected upon land belonging to the city, and in respect of any arch, bridge, structure or approach, the property of any corporation or individual, and extending in, over or upon any street, avenue, highway, park or public space." These powers constitute in effect a

control of all purely decorative art for public purposes, and, subject to a request by the local authority, a control of all amenity in public structure.

5. The following notes on the work of the New York Art Commission will probably be a sufficient indication of the establishment and working of similar Commissions in other cities of America: The first few years were difficult. The Commission had no permanent quarters, and met in the homes and offices of various members (a usual and very undesirable condition with young Commissions and Civic Societies). In 1902, however, offices were provided in the City Hall, the Municipality took over the cost of administration, and at the same time an executive officer, clerk and typist were appointed. It was at this time that the jurisdiction of the Commission was extended to cover all public structures built wholly or in part upon public land; also upon the lines, grades and plotting of public ways and grounds. The only exception being that when such structures cost \$350,000 or less, the Commission may be requested by the Mayor or the Board of Aldermen not to act. Such a request has never been made.

6. As the Commission *showed willingness and ability to function effectively*, it gradually became the custom for the Mayor to refer to it all *important* structures, and later practically *all* structures. Hence the various extensions of power already referred to, which have merely put into legal form what had already become a common practice.

7. During its first four years the Commission received an average of six submissions annually, but in 1907 (the ninth year) 168 submissions were dealt with, and in the year 1912, 263—increases which tell their own story.

8. In conclusion of this section, it may be summarised that by 1912 there were seventeen Art Commissions in America, ranging in power from an advisory capacity (as in the case of the National Commission at Washington or that of the city of Charleston) to the fully organised New York Commission, which forms part of the city government, and has power to approve or disapprove both municipal and private projects.

9. "The London Society," founded in 1912, has from the outset had the support of many very distinguished people, and of such public bodies as the Royal Academy, the Royal Society of Arts, the Royal Institute of British Architects, the Royal Society of Sculp-

tors, the Surveyors' Institution and the Incorporated Society of Municipal Engineers.

10. In its first year 400 members were enrolled, some of whom appear to have fallen away during the war, but in 1919-20 the membership more than doubled, and this rate of increase has probably been maintained, since it has been fully justified by the excellent work accomplished, including as it does the wonderfully interesting and useful development plan and also the recently published *London of the Future*. With a subscription list in 1920 of £550 a year, and a life membership reserve fund of £536, the Society has apparently got well away from the cruder forms of financial difficulty.

11. Civic Societies now exist in Birmingham, Cardiff, Chesterfield, Glasgow, Leeds, Nottingham and Sheffield, and I believe in one or two smaller places. Some are just formed, some have been established four or five years, and some no doubt are more or less in that state of suspense which ensues when the warmth of good intentions is brought in contact with the apparently insoluble apathy of a Philistine Public and its representatives.

12. In the matter of policy it may be noted that two methods of procedure are possible for Civic Societies: The public may be aroused by propaganda to require the support of their municipal representatives for a clearly defined policy favourable to amenity (a line of action which it is possible might involve some change of Departmental personnel) or, alternatively, they may work as an advisory body in association with existing conditions, when those conditions are sufficiently friendly towards the objects in view.

13. The Birmingham Society (founded in 1918) has not so far aimed at a large membership. It was an early decision of the Council that we should test our opportunities, and our ability to meet them, before going to the public for support, and we have been able to do this largely by virtue of a grant of £300 a year from the Birmingham Common Good Fund. (A Municipal Trust established by Alderman George Cadbury in 1917, and controlling at that time an Endowment Fund and an Amenities Fund of £10,000 and £3,000 respectively. These amounts have since been very greatly increased.)

14. Respecting the important matter of office equipment, those of you who saw Professor Abercrombie's article on "A Civic Society" in the *Town Planning Review* of April, 1920, may remember the following reference to the need for a full-time secretary and independent quarters. He says: "It is absolutely essential for the work of the Society that there should be a permanent and paid secretary, and an office, however small, should be obtained. It is a great mistake to attempt to make business men responsible for the

secretarial work in connection with a Civic Society. Nor is a part-time secretary sufficient; besides the purely secretarial work, there is the continuity of the Society's action, which can only be maintained and stimulated by having someone whose sole object it is to keep it going. The somnolence which has crept over certain Civic Societies can be directly attributed to this absence of a permanent secretary, for when any job of work occurs, a committee of busy men is apt to find excuses for shelving it, if on their shoulders the burden alone falls. On the other hand, a few minutes of advice from these same members of the committee is sufficient for the secretary's guidance."

15. It now remains to preface my notes on the work of the Society by a statement of its general aims. These are as follows:—

- No. 1. To stimulate historical interest in the city, and to preserve all buildings and monuments of historical worth.
- No. 2. To preserve all objects of beauty and to maintain a vigilant opposition to all acts of vandalism.
- No. 3. To promote a sense of beauty and to stimulate civic pride in the domestic and civic life of the citizens by urging the adoption of the highest standards of architecture for domestic buildings, offices, warehouses, factories, etc.
- No. 4. To work for a more beautiful city—
  - (a) By advocating the public acquisition of land for the provision of open spaces for recreative purposes, parks, parkways, squares, gardens and ornamental features at road crossings, etc.
  - (b) By assisting with advice any scheme or works controlled by public bodies, ranging from town planning to designs for parks, bridges, fountains, memorials, shelters, seats, lamp standards, tramway masts and the like.
  - (c) By co-operating with the Education Committee and Training Guilds for the development of local art, and helping to co-ordinate the efforts of existing societies by uniting Architectural, Engineering, Artistic and Handicraft Groups in a common aim.

In addition, to influence the work of others, to select suitable projects to be carried out by the Society itself.

The Society shall seek to carry out these aims by means of newspaper and other propaganda, including exhibitions, lectures, competitions, etc.

16. In working out this programme, contact with the City Authorities (other than that established by the Lord Mayor as President, and the annual election of two members of the City Council to serve on the Council of the Society) has been kept green by the



occasional purchase of open spaces for presentation to the City as recreative areas. The last purchase of 42 acres, adjoining Dr. Chamberlain's residence at Highbury having just been completed, the land being conveyed to the City with an agreement that the Society is to be consulted in the lay-out and treatment of the grounds. These purchases were made possible by the generosity of anonymous Trustees, who placed £15,000 at our disposal for this purpose in 1918.

17. From the first, the Society has worked hard to get every phase of recreation in the city co-ordinated and reduced to a system, with a view to providing proper facilities for those areas at present neglected, especially in the centre of the city. A resolution to the Lord Mayor from one of several meetings resulted in invitations from the City Parks Committee to representatives of various organisations, to discuss our suggestions, and a Special Committee now exists to consider and report upon the whole question of recreation in its broader aspects, a work which is held up at present by lack of funds, the Trust money in our hands not being available for this purpose.

18. Another of our park activities is associated with a scheme for the special treatment of a road junction (agreed to by the Public Works Department), which includes the provision of a new entrance to our principal suburban park. Lord Calthorpe, the local landowner, is giving two corner sections of land (about one acre), and the Society has allocated £1,000 towards the cost involved in special features of the scheme. This work is likely to be carried out at an early date as part of an unemployment scheme.

19. Two Park Guides have been published, one of the Lickey Hills reservation, which is now in its third edition; and one of Sutton Park, recently issued. These Guides are in great demand. We publish without profit. We exclude all advertisements, and we take pains to make these and our other publications carry the message of amenity which we exist as a Society to inculcate.

20. A gold medal is awarded annually by the Society to the author of the work judged to have added most to the recent amenities of the City.

21. Our first award in 1921 went to Music, in the person of Mr. Appleby Matthews, conductor of the Municipal Orchestra, and our second to Mr. Barry Jackson in recognition of the high civic importance and artistic distinction of his work at the Repertory Theatre. In each case the ceremony of presentation was given a definite civic character, and it is already evident that this public recognition of noteworthy service to the *higher life of our City is warmly approved on all sides.*

22. In such matters as the design of street decoration for public ceremony the City Authorities willingly

seek our aid, and sought our help when staging the Armistice Ceremony in 1921 and 1922. The scheme prepared by the Society for this occasion arranged the several factors of the ensemble in suitable relation to one another, leading naturally to a massed arrangement of coloured silks draped from the podium of the Town Hall to the ground, with a pedestal for floral tributes below, and a rostrum for the City's representatives under the colonnade above. Time, money and materials were short but we succeeded in giving a dignity to the occasion which it had previously lacked. It is now quite usual for the Society to be consulted on occasions of similar character.

23. Another phase of our work is represented by a project for the preservation of the old village of Northfield, within the S.W. Birmingham Town-Planning Scheme. This work had the sympathetic support of the Public Works Department during its preparation, and the proposal eventually put forward now forms part of the town plan. Moreover, a photographic record of the village having been made and its history written up, the work was published as one of our brochures.

24. Schemes of this kind have a practical importance to-day, for they illustrate very clearly the need for preserving such picturesque buildings, villages, and natural scenery as remain about our cities, at a time when rapid building developments may thoughtlessly destroy them.

25. I need do little more than indicate by name such obvious civic work and propaganda as the organization of exhibitions, lectures on civic subjects by first-class lecturers, committee work on memorials and housing, work on smoke abatement, advertisement control; designs for street accessories, and an attempt to initiate peripatetic lectures in our Art Gallery. In these and similar matters we play our part, which for some of us means rather an appalling amount of work, *for although our proceedings are as brief as we can make them, there is nevertheless much time spent in unavoidable debate, that would be much better employed in producing the thing discussed if that were possible.*

26. The intervening five years of advocacy by the Civic Society have been years of increasing knowledge of municipal affairs on our part, and an indispensable preliminary to sympathetic co-operation with the City Authorities. It is evident, too, that in this interval of time, a certain hesitation on the part of the City Council has changed to trust and goodwill, without which such a Committee as this could scarcely hope to be effective.

27. (8) Hereafter all such new designs for public buildings, bridges, lamps, gates, fences, public conveniences, or other structures to be erected upon land

belonging to the City, all such proposals for planning and laying out new parks or park extensions, all such new statues, fountains, arches, monuments or memorials of any kind to be erected in any public street, square, park or municipal building, as may be selected for submission to the Advisory Art Committee by the City Departments concerned, shall be reported upon by the Advisory Art Committee.

28. You will notice that we are still, as it were, on probation. The City Authorities reserve the right to accept our advice or not; they also submit their proposals to us at pleasure; but we are anxious to make no false step in a matter of such far-reaching importance, and it is for us to so prove our capacity by the advice we give, that we shall accomplish out of deference to our wisdom, that which we have no power to enforce.

29. Such new methods as these are best put in motion gradually, and if you recall my references to early caution and subsequent activity in America, you will see that we have taken an equally reasonable course, and that success is very largely our own affair.

30. Clause 6 of the Advisory Art Committee's con-

stitution stipulates that no details of its work shall be divulged, but I may say in quite general terms that the spirit of co-operation between the Committee and the City Departments is excellent; that we already have much work to do; and that one of the greatest pleasures in doing this work comes from the knowledge that it has an immediate bearing upon actualities.

(Signed) WILLIAM HAYWOOD.

Hon. Secretary Birmingham Civic Society.

Hon. Secretary Birmingham Advisory Art Committee.  
12/6/'23.

#### ANNUAL EXHIBITION.

The President and Council desire to remind members that it would be well to commence the preparation of drawings for the Annual Exhibition to be held about Easter, 1924. If members will make an early start to collect work, the success of the Exhibition is assured. The Council wishes the next Exhibition to be a fully representative collection of work. Any suggestions as to the conduct of the Exhibition will be welcomed by the Council.

---

## INSTITUTE LIBRARY

### *Library Rules for Borrowers.*

1. If a book is lost or stolen from a borrower, or if the same is not returned by him within fourteen days, from the date of issue, he shall replace it, or pay to the Council the full value of such book. In case of the book being part of a set or series, and the borrower neglecting to return the same within fourteen days as aforesaid, or being unable to replace the same, in consequence of its having been lost or stolen, he shall pay to the Council the full value of the whole set or series.

2. A borrower shall keep the books borrowed by him from the Library clean and in good condition, and shall not tear, nor turn down the leaves, nor mark, nor deface, damage, or injure the book in any way.

3. If a book is torn, damaged, marked, defaced, or injured while lent to a borrower, such borrower shall, within one week of notification from the Council, replace the book, or pay to the Council the full value

of the book; or, in case it is part of a set or series, and he shall not replace the said book, the full value of the whole set or series.

In cases where the book is replaced the borrower shall be entitled to the injured book.

4. A borrower shall be entitled to borrow only one book at a time, but at the discretion of the Council two volumes of one work may be issued at the same time.

5. A borrower shall return any book borrowed at the latest within fourteen days after the date of issue; but books may be renewed upon application at the discretion of the Council.

6. If a book is not returned within the time prescribed by the preceding rule, the borrower shall pay the sum of sixpence for each and every day the book is retained beyond the prescribed time.

7. Certain volumes may not be removed from the Library, and are for reference only.



## LIST OF BOOKS

The following is a catalogue of books in the Institute Library. Reference can be made to same on application to the Secretary.

31. Greek Architecture—Brown, E. A.
92. Classic Architecture, folio plates—Mitchell, C. F.
101. Rome—Taylor, G. L., and Cresy, E.
108. The Architecture of Palladio.
32. Norman Architecture—Brown, E. A.
34. Gothic Architecture—Brown, E. A.
36. Abbey Church of St. Albans—Buckler, I. E., and C. A.
- 42-43. Memorials of Cambridge, 2 vols.—Le Keux.
- 47-50. The Antiquities of Scotland, 4 vols.
51. Abbeys of Teviotdale.
52. Details of Gothic Architecture—Colling, J. K.
- 53-55. Examples of Gothic Architecture, 3 vols.—Pugin, W.
- 56-57. Analysis of Gothic Architecture, 2 vols.—Brandon, R. and J. A.
- 67-69. The Ecclesiologist, 3 vols.
77. Paley's Gothic Moulding—Fawcett, W. M.
102. Worcester Cathedral—Wild.
91. Gothic Architectural Parallels—Sharpe.
99. Views of Houghton.
110. Mansions of England in the Olden Times—Nash, J.
106. Architectural Remains of the Reigns of Elizabeth and James.
- 35-36. Public Buildings of London, 2 vols.—Pugin and Britten.
- 38-39. Churches of London, 2 vols.—Godwin and Britten.
93. Plans, Elevations and Sections of Buildings—Soane, J.
100. The Works of Inigo Jones—Triggs, H. E., and Tanner, H.
- 96-97. Later Renaissance Architecture in England, 2 folios—Belcher, F., and McCartney, M. E.
95. English Interior Woodwork—Tanner, H.
21. The Art of the Plasterer—Bankart, G. P.
- The Decoration and Furnishing of Town Houses—Edis, R.
46. The Art and Craft of Garden Making—Mawson, T. J.
89. Detail and Ornament of the Italian Renaissance—Oakshot, G. J.
- 85-88. Die Renaissance in Italy, 4 folios—Schutz, A.
- Architectural Styles—Rosengarten, A.
73. The Story of Architecture—Waterhouse, P.
79. History of Architecture—Fletcher, B. F.
90. Architecture—Juone.
70. Palaces of Nineveh and Persepolis—Ferguson, J.
83. History of Ancient Architecture—Ferguson, J.
82. History of Modern Architecture—Ferguson, J.
84. History of Medieval Architecture—Ferguson, J.
33. History of the Gothic Revival—Eastlake, C.
38. Rickman's Gothic Architecture—Parker, J. H.
44. Gothic Architecture in England—Bond, F.
71. History of Architecture (Gothic and Renaissance)—Smith & Poynter.
75. Concise Glossary of Architecture—Parker, J. H.
76. Introduction to the Study of Gothic Architecture—Parker, J. H.
- 26-27. History of Renaissance Architecture in England, 2 vols.—Blomfield, R.
28. Early Renaissance Architecture in England—Gotch, J. A.
41. Gwilt's Encyclopedia of Architecture—Papworth, D. W.
- 58-67. Dictionnaire Raisonne de l'Architecture Francais—Viollet-le-Duc, M. E.
105. Plans of Sydney—Done, H. P.
105. Who's Who in Architecture.
1. Strength and Elasticity of Australian Timbers—Warren, W. H.
7. Building Materials—Middleton, G. A. T.
- 22-25. Modern Buildings, 4 vols.—Middleton, G. A. T.
- 15-16. Building Construction, 2 vols.—Mitchel, C. F.
20. Modern Practical Joinery—Ellis, G.
12. Shoring and Underpinning—Hadder-Stock, C.
18. Specification in Detail—Macey, F. W.
- Australian Building Practice—Nangle, J.
13. Practical Science for Plumbers and Engineers—Wright-Clarke, J.
17. The Plumber and Sanitary Houses—Hellyer, S. S.
19. Sanitary Engineering—Moore, E. C. S.
6. Australian Building Estimator—Jefferies, W.
- Builder's Price Book, 1910—Lockwood.
- Redress by Arbitration—Foulkes-Lynch, H.

107. Sterography, A Complete Body of Perspective—Hamilton, F.  
 10. Acoustics of Public Buildings—Smith, T. R.  
 5-9. Principles of Plane Geometry and Projection, 2 vols.—Angell, H.  
 2. Principles of Architectural Perspective—Middleton, G. A. T.  
 11. The Elementary Principles of Graphic Statics—Hardy, E.  
 45. Architectural Drawing—Spiers, R. P.

The following Periodicals and Journals are also available:—

*Journal of Proceedings of the Royal Institute of British Architects.*

*Journal of Proceedings of the American Institute of Architects.*

*Journal of Proceedings of the Architectural Association, London.*

*Journal of Proceedings of the Natal & Transvaal Institutes of Architects.*

*Journal of Proceedings of the Japanese Institute of Architects.*

*The British Builder.*

## BOOKS ADDED TO LIBRARY

FROM THE COLLECTION OF THE LATE ARTHUR PRITCHARD ESQ.

*These Books have the Imprint.*

Masonry, Bricklaying and Plastering ..... Burn  
 How to Estimate ..... Rea  
 Specifications in Detail ..... Macey  
 Building Specifications ..... Leaming  
 Old Cottages and Farm Houses .. Davie & Dauber  
 Commonsense Homes ..... Sills  
 Treatise on Architecture ..... Ashpitel  
 Book of Country Houses ..... Newton  
 Architectural Parallels ..... Sharpe  
 Book of Houses ..... Newton  
 Architectural Iron and Steel ..... Birkmire  
 Law of Fire Insurance ..... Colenso  
 School Architecture ..... Robson  
 Principles of Planning ..... Marks  
 High Office Buildings ..... Birkmire

*These Books are without the Imprint.*

Architectural Examples in Brick, Stone, Wood and Iron.

Engineers' Standard Catalogues, 1919-1922—  
 Engines and Boilers.  
 Pumps, Machinery and Plant.

Sanitation, Heating Construction.  
 Electrical.

British Standard Exporter, 1919-1921—Hardware, Earthenware, Leather.

British Standard Exporter, 1920-1921—Furniture, Music, etc.

Municipal Engineers' Specification.

Colonial Compendium and Export Catalogue, 1920.

Colonial Compendium and Export Catalogue, 1921.

### THE COMMON ROOM.

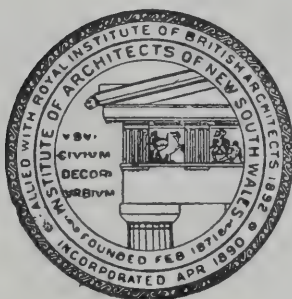
The COMMON ROOM at the INSTITUTE OF ARCHITECTS is available for Arbitrations, Consultations and the like.

*Terms on application to the Secretary.*



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



NOVEMBER 15TH  
1923

VOL 12. No. 11

PRICE ONE SHILLING

## CANBERRA IMPRESSIONS

SIR CHARLES ROSENTHAL, F.R.B.A., President of the Institute of Architects of New South Wales, recently organised and headed a party of visitors to Canberra, and by the perfection of his arrangements, and by his charming geniality, caused the occasion to be pregnant with valuable experiences and most pleasant memories.

### The Journey.

The party left by the Cooma mail on Friday evening, 5th October, and returned to Sydney early on the following Sunday morning. A sleeping car was engaged and retained at Queanbeyan during the Saturday, and not only did the travellers enjoy comfortable nights, but also they were able to remain in their berths until the mornings were well advanced. Meals were obtained at Walsh's Hotel at Queanbeyan, and at the Commonwealth Hostel at Acton, and left nothing to be desired either as to quality, or service. The Mayor of Queanbeyan, Mr. J. G. Harris, met the party at Queanbeyan, rendered valuable assistance to Sir Charles in various details, both he and Mrs. Harris were the guests of honour at dinner on Saturday evening, and Mrs. Harris accompanied the ladies of the party during the motor trip of that day.

### The Members.

The party consisted of Sir Charles Rosenthal, F.I.A., F.R.I.B.A., Mr. H. Joseland, F.I.A., Mr. J. A. Kethel, F.I.A., Mr. E. A. Scott, F.I.A., and Mrs. Scott, Mr. Allen W. Gerard, A.I.A., Mr. R. Keith Harris, A.I.A., A.R.I.B.A., Mr. J. D. Moore, A.I.A., A.R.I.B.A., Mrs. G. A. Taylor, A.I.A., and Mr. Taylor, Mr. W. Poole, Chairman, Sydney Division Institution of Engineers of Australia, Mr. N. Weeks, City Surveyor, and John J. Lough, Secretary, I.A.N.S.W. (on leave).

### The Reception.

The members of the party were joined upon entering Commonwealth territory by Col. P. T. Owen, the Director-General of Federal Public Works, who courteously escorted them to Kurrajong Hill, the site of the future Capital, where Mr. John Sulman, F.R.I.B.A., and Mr. E. N. de Burgh (Members of the Federal Capital Advisory Board) were waiting to receive them. The Director-General explained the layout of the Federal Capital, as designed by Mr. W. B. Griffin, indicating the main and secondary axial lines, the divisions of the Capital into Parliamentary, Municipal, Residential

and Manufacturing sections, and thus prepared the visitors' minds for the detailed inspection which followed.

The Director-General contrasted the growth of Canberra with that of most other cities, in that Canberra's services of roads, bridges, water supply, sewerage, and electric lighting had been provided in advance of buildings, whereas usually building is undertaken first and the services follow.

The party were then taken in hand by Mr. H. M. Rolland, the Federal Works Director, together with Mr. Richmond, the Assistant Works Director, and were by these two gentlemen given a thorough insight into the present and contemplated activities of the territory.

### Impressions.

Prominent among the impressions gained were firstly that Canberra's design affords a vision of ample spaces and gracious contours, together with infinite possibilities and unrivalled opportunities, and one's spirit desires to return to earth after the lapse of a century or so to ascertain what man has done to take advantage of nature's liberality. Secondly, that the Church of St. John the Baptist, sheltering under the slopes of Mount Ainsley, presents a striking picture of restfulness and peace. It reminds one strongly of the Church immortalised in "Sweet Auburn loveliest village of the plain," whose parson was reckoned "passing rich on forty pounds a year." Here before the days of motors, lived and laboured a clergyman, who was incumbent for 51 years, and the mind conjures up pictures of the marriages, births and deaths which were solemnised in the old church, and how the people flocked on Sundays by cart, sulky and on horseback, to greet their clergyman and neighbours and take part in the village services. Here another incumbent returning from months of missioning to the Murrumbidgee settlers, was cut off by the river in flood, and drowned in sight of his home, and perhaps of wife and child. Here are fine examples of stained glass work of very early date in the history of New South Wales, and here too are carved cedar roof trusses of most unusual and interesting type. Thirdly, the dam on the Cotter, with its placid lake above, and its foaming cataract below, gives the impression of vast latent energy, transformed to irresistible force, like to the placid existence of a peaceful nation transformed to irresistible energy when occasion arises which crushes and overwhelms all opposition.



### Services.

In carrying out the works connected with the various services, large sums of money must have been expended. Results are ample and evident enough, but much of the engineering work necessary to bring them about, is necessarily hidden. The many miles of roads already constructed, both for the use of the Capital and for the accommodation of settlers, present fine, even, metalled surfaces, upon which it is a pleasure to travel, but their heavy foundations, cuttings and fillings escape general observation. Two bridges, carried away by flood, have been replaced by fine timber constructions with long lengths of earthwork approaches, which will give secure access and transit for the future, but at heavy cost. The water supply comprises miles of heavy cast iron pipes, from the Cotter dam, carried under the Murrumbidgee and up to a 3,000,000 gallon service reservoir near the top of a hill over 2,000 ft. high. The water is pumped up from a pumping station on the bank of the Murrumbidgee and gravitates from the service reservoir to a 1,000,000 gallon distributing reservoir, situated behind the Capital; hence it is reticulated to all the buildings now in the Capital, and the existing reticulations are capable of indefinite extension. The main sewer oviform in section, 5 ft. 6 in. high and 3 ft. 6 in. wide, has already been laid for a great part of its total length, and in order to ensure speedy completion, 300 men are at work upon it, being housed under canvas in three separate camps. The electric installation is so ample that not only does it supply the needs of Canberra, but also Queanbeyan, five miles away.

### The Itinerary.

The places visited according to an itinerary after leaving the Capital Hill were: (a) The site of the Provisional Parliament House, where a large gang of men with horses was operating shovel scoops in the removal and laying aside for re-use the rich top surface soil. This Provisional Parliament House is to be ready for occupation in two and a half years. (b) The site of permanent Parliament House, the date of whose inception no man can foretell. (c) The Hostel, comprising a large central pavilion containing the dining rooms and offices, with drawing rooms, lounges, billiard rooms and appurtenances; comprising also residential pavilions of one and two storeys arranged radially around the central block, where Members of Parliament and visitors will find adequate and comfortable quarters. Single rooms, suites, flats, and even a whole floor, or a whole pavilion, will be obtainable by arrangement. The Hostel is in the hands of contractors, who are

bound under penalty to finish within a proximate date. (d) Blandfordia, a residential district, where many cottages of seven rooms or so, with red brick or rough-cast walls, with red tiled roofs, have already been built, at an approximate cost of £1,200 each. (e) Telopia School. This school was opened a month ago. It is built of brick with tiled roof, will accommodate 200 scholars, and has open pavilion, play rooms, in addition to the class rooms. The Power-house, of reinforced concrete, with powerful machinery working day and night. The foundations for these machines were excavated forty feet deep to solid rock. (g) The Civic centre, the site for future municipal buildings, and nearby a group of officers' residences in style not dissimilar from those of Blandfordia, but here the grounds in front are ornamented with beds of flowers without dividing fences, which set them off in a very pleasing manner. (h) The Church of St. John the Baptist, with its adjacent Rectory, both screened by judiciously planted trees, present an aspect of perfect peace and repose. (i) Commonwealth Avenue. This Avenue is very wide and has a plantation of trees and flowering shrubs down its centre, which not only gratifies the eye but divides the traffic into up and down lines, and also provides a permanent wind break. The same admirable planning is observable in connection with other main arteries. (j) Acton. This is an old homestead, which is now the centre of a group of temporary buildings for officers' quarters and the like, in one of which, known as the Hostel, lunch was served and fully appreciated.

In the afternoon, visits were paid to: (a) The compressing machinery and receiver, where air is compressed and stored for the service of the drills operating in the sewer tunnel. The pressure afforded is 100 lbs. to the square inch. (b) The Brickworks, where machinery is operating, giving

## CRICKET MATCH

The Cricket Match between the Institute and the Master Builders' Association, will take place on the Sydney Cricket Ground on Wednesday, December 19th.

Members desiring to take part in the Match should inform Mr. Rupert Minnett as early as possible, to enable the team to be selected.

an output of 5,000,000 bricks per annum. The Tileries also, where the French pattern tile already referred to is made. A continuous kiln was burning tiles at the time of the visit. There are stacked on the site no less than six and a half million bricks of most admirable quality, whose appearance as set in the various buildings elicited general praise. The wisdom of having this large quantity to draw upon, now that building operations are to be pushed, was apparent. (c) The sewer outfall, where the sewage is to be treated and its effluent allowed to escape to the river. (d) The Cotter River Dam. A drive of about ten miles from the outfall over fine winding hard-surfaced roads, brought the party first to the pumping station, and then to a new bridge over the Murrumbidgee, where a fine view of the junction of the Cotter with the Murrumbidgee opens up, and lastly, by a route along the Cotter Banks to the dam itself. The magnificent work of the engineers responsible for this dam was duly admired, and it was learned that it was designed to be carried thirty-three feet higher when necessary. The return trip was then undertaken. (c) The last place visited was Duntroon, where Colonel Heritage, Colonel Laverack and Colonel Martin received the party. The ascent of the hill at the rear of the College was undertaken, a pilgrimage was made to the grave of Gen. Sir W. T. Bridges, after which the main features of the College were explained, and Colonel Heritage exhibited the cedar panelling and other objects of interest in the old homestead.

Queanbeyan was reached in time for dinner after a long and interesting day, and in due course the party returned to Sydney, wiser and better for the knowledge and information acquired through the kindness and organising ability of its leader.

The following are the latest statistics regarding Canberra:—

### Water Supply.

Water is derived from a catchment area of 165 sq. miles, and is impounded in by a concrete dam near junction of this stream and Murrumbidgee.

From the dam the water gravitates to the Pump House, from where it is pumped into Pipehead Reservoir on Mt. Stromlo, thence by gravity to Service Reservoir on Red Hill, from where it will be distributed to the various points in the city area. The first distribution main is to be laid during the next few months.

**Cotter Weir** was designed for a height of 100 feet, and to impound 1,400,000,000 gallons, and the Department proposed to construct it to that design.

The present crest level (R.L. 1619) is 64 feet

above bed of River, and impounds 380,000,000 gallons.

The average daily flow of Cotter River is 70,000,000 gallons.

**Gravity Main to Pump House** is 18 in. cast iron, which, from its outlet at the dam at 1573 R.L. to the Pumps at 1558 R.L. is about three-quarters of a mile in length passing through tunnel 2,000 feet long through hills, and another tunnel 600 feet long under Murrumbidgee.

**Plant in Pump House** consists of two electrically driven centrifugal pumps (Gwynne & Co., London), each with a capacity of 100,000 gallons per hour.

Power is supplied from Power House by high tension (10,000 volt) transmission line—the Electrical Sub-Station adjoins the Pump House.

**Rising Main to Pipehead Reservoir** on Mt. Stromlo is 18 in. cast iron and rises 813 feet in 3½ miles.

**Pipehead Reservoir Mt. Stromlo R.L. 2371** is of concrete with 3 compartments, and has capacity of 3,000,000 gallons.

**Service Reservoir Red Hill R.L. 2350** is of similar design to Pipehead Reservoir. Water can be distributed direct to city from Pipehead Reservoir, and Red Hill kept for reserve supply.

**Main between Reservoir** is 18 in. cast iron and is 6½ miles in length.

From Red Hill Reservoir water has been provisionally laid on to Yarralumla House, Brickworks, Afforestation, Nursery, Acton, Civic Centre, Power House, Royal Military College, and Molonglo Settlement.

Works in hand consist of a service reservoir on Mt. Russell (R.L. 2,085) of 1,000,000 gallons capacity, capable of extension of 3,000,000 gallons and 8 miles of cast iron mains from 12 in. to 6 in. diameter on permanent locations.

Cost of water supply scheme to date, approx. £300,000.

### Main Sewer.

The first section of the Sewerage Scheme is the construction of main outfall sewer from the city boundary to the treatment area—a distance of approximately 3 miles.

The sewer is egg-shaped, 5 ft. 6 in. high by 3 ft. 8 in. wide, and is constructed of concrete; it has a fall of 3 ft. per mile, which, with a velocity of 2.3 feet per second, will be sufficient to meet the needs of a population of 125,000.

The first section is at an average depth of 35 ft. below the surface, the deepest being 100 ft., and most of the distance is through rock of varying



degrees of hardness. Tunnelling has been carried out by means of compressed air drills, all the plant being electrically driven.

The work was commenced in 1914 and carried on until 1917, during which time  $1\frac{1}{4}$  miles of tunnel was driven and 2,000 ft. lined with concrete.

Work was recommenced early in 1922, and now nearly completed.

The extension of the main sewer from city boundary to centre of city is in hand, distance, 11,000 ft.

#### Power House.

Building is a steel-framed structure with concrete walls.

**System.**—Three phase generation, 5,000 volts, 50 cycles, and 3 phase 4 wire distribution from transformer stations. Consumers' voltage, 240 light—415 power.

**Plant.**—Four two-drum Babcock and Wilcox boilers, with superheaters and mechanical stokers.

One Green's economiser of 400 tubes, with preheater of exhaust steam type.

Two Nicholson's feed pumps with automatic control.

Coal crushing, filling, elevating and weighing plant—capacity, 40 tons per hour.

One 150 K.W. Robey Hall set, and two 600 K.W. Bellis and Morcom-Brush sets, with all engines of the enclosed forced lubrication type, coupled to generators direct, and giving 5,500 volts at terminals.

Two condensing plants, each with separate circulating pumps and kinetic air pumps, interchangeable. Revolving screens for removing debris from condenser water.

Pattison water softening and oil eliminating plant.

Total plant capacity, 1,350 K.W.

Two 600 K.W. transformers, stepping up from 5,000 to 10,000 volts, from transmission line to Cotter River pumping station. Total connections, 2,800 K.W.; current generated during year, 7,800,000 units.

Current is supplied to Royal Military College, offices and dwellings at Acton, civic centre, brick-works, and power house, workshops, sewer, Cotter River, Yarralumla House, Molonglo Settlement and town of Queanbeyan.

#### Roads.

Roads existing in the Territory prior to acquisition by the Commonwealth have been greatly improved; 100 miles have been reformed and gravelled, and new roads outside city area constructed to Cotter River and to Mt. Stromlo. About 200 miles of these roads are being maintained.

The new roads for the city development have been undertaken, and about 20 miles of roadway has been constructed, as follows:—

$1\frac{3}{4}$  miles made and metalled.

$5\frac{3}{4}$  miles made and gravelled.

$6\frac{1}{4}$  miles formed, and

6 miles now in course of construction.

These roads are laid out in accordance with the city design and serve to link up the main activities and settlements, and will eventually take the place of the old roadways.

In addition to these city roads a new road is in course of construction from the Murrumbidgee River Bridge at Cotter Junction to Uriarra, a distance of 5 miles.

The first portion is through steep mountainous country, and this road will give direct access to the south-western portion of the Territory and through same to Brindabella.

#### Bridges.

**Cotter.**—Work completed on three bridges in the Territory—one across the Cotter River, 105 ft. in length, with steel girders on concrete piles. This bridge takes the place of a temporary constructional bridge of logs on tree stumps, and will give access to the Cotter Dam, proposed chalet, and road up Paddy's River.

**Murrumbidgee.**—Bridge across Murrumbidgee River has been extended for a distance of 210 ft., of similar construction to the existing bridge.

The importance of this bridge has been increased owing to new Uriarra Road leading from same, and also to the necessity of uninterrupted access to the water supply works on the Cotter River.

**Molonglo.**—The connections between the portions of the city on the north and south sides of the Molonglo are being established by the construc-

## ANNUAL EXHIBITION

Members are again notified that the Annual Exhibition will be held from March 3rd to March 19th, 1924, in the Education Department Gallery.

Sending in day is the 27th February, 1924.

*Please make a big effort to be represented.*

tion of high-level bridge and approach on Commonwealth Avenue. The bridge across the Molonglo River will be on concrete piers with composite trusses of 100 ft. spans, about 300 ft. long.

A high bank across the flat on the southern side with a further bridge across a billabong completes the scheme.

The bridge across the billabong is a pile structure 425 ft. in length, and has been completed.

#### Cottages.

Forty-two brick cottages erected on permanent sites at civic centre, power house and brickworks settlements by day labour, together with necessary drainage, water supply and electric light services.

Fourteen are being built by day labour, and nineteen by contract.

#### Brickworks.

Brick-making, to be followed by tile-making, was undertaken at an early stage, in order to properly establish the manufacture and to accumulate a reserve sufficient to meet cumulative demands during the later stage of building, when large weekly supplies will be necessary.

The works and plant are briefly as follows:—

Staffordshire continuous kiln of 20 chambers, and brickmaking machines—mixers, grinding mills, and presses.

Capacity, 20,000 bricks per day.

Tile-making plant—installed 1922.

Capacity, 5,000 roofing tiles per day.

Number of bricks on stock, 6,000,000—semiplastic and dry-pressed types.

The roofs of the various buildings are now being covered with locally made tiles.

#### Ainslie Intercepting Drain.

The heavy discharge of water from Mount Ainslie entails a protecting channel which will divert the flow of water and thus protect the area to be occupied by the civic centre.

9,000 ft. to the east of civic centre has been excavated as a protection from storm water.

#### Hostel.

The scheme of initial works includes a first-class hostel to be erected by the Government, and which will be made available to the visiting public.

The building was commenced during last September, and the immediate proposal is a main building and five pavilions for the accommodation of 100 visitors, which can be doubled by erection of five additional pavilions.

Building is of brick, rough cast walls and red roofing tiles.

Main building consists of lounge, writing-rooms, dining-rooms, kitchen, servants' quarters, heating and vacuum cleaning plants.

Connected to main building by means of covered ways are three one-storied pavilions and two two-storied pavilions containing bedrooms and private sitting rooms, and necessary bathrooms, etc.

The foundation work was carried out by day labour and a contract is now in progress for the superstructure.

#### Telopea School.

Building has been constructed of brick with tiled roof and designed on latest educational lines. The building was opened on the 11th September, 1923.

Total number of men engaged on day labour works is approximately 900.

---

## New Process of Iron Roofing

*Extract from "Sydney Morning Herald,"*

*24th October, 1923.*

The difficulty of obtaining adequate supplies of roofing material has resulted in a new process in iron being devised, which, it is claimed, has advantages over ordinary corrugated galvanised iron. A roof of the latter proves very hot in the summer, especially in the interior of the State, and the closeness of one sheet lying on the top of another causes the ends of the sheets to corrode more quickly than any other portion of the roof. Under the new process the sheets of iron are so manufactured that the end one is curved upwards three inches, and the end of the next sheet is curved downwards three inches, and the two fit into each other in such a way that there is between each sheet an air space of at least half an inch. Close contact is thus avoided, and corrosion, it is claimed, is eliminated. It is well known that new sheets of iron stacked one on top of another and exposed to the weather for a short time will become oxidised and corrosion will set in. If, however, battens are placed between the sheets this can be avoided. It is claimed that the new and patented process, through the creation of the air space between the sheets, provides similar protection. The top ends of the side laps are provided with a simple capping, so that condensed water cannot get between them, and therefore rust through condensation is guarded against. The inventors are Messrs. Weine & Co. Amongst those who have used these sheets is the Sydney Harbour Trust, who has just completed large sheds on the Federal Wharf where 2,000 sheets of this iron have been placed in position. The Casino at Bondi has just been roofed with the same material.



## THE KANDOS CEMENT COMPANY LIMITED

THE Council of the Institute of Architects of N.S.W. accepted an invitation from the Directors of the Kandos Cement Company to visit the Cement Factory at Kandos, and travelled thither by the Gulgong Mail on the 4th November.

The Council was represented by the President, Sir Charles Rosenthal, F.I.A., F.R.I.B.A.; the Hon. Secretary, Mr. H. C. Day, F.I.A.; Professor Leslie Wilkinson, F.I.A., F.R.I.B.A.; Mr. L. C. McCredie, A.I.A.; Mr. H. V. Vernon, F.I.A.; and Mr. John J. Lough, Official Secretary (on leave). Mr. C. Roberts, representative of the Kandos Company for the North, accompanied the party.

The travellers were met at Sydney Railway Station by Mr. F. P. Kneeshaw, General Manager of the Kandos Company, who, before the trip, by courteous correspondence, and, during the same, by unflagging kindness and attention, gave each member the impression that the greatest importance was attached to his individual presence.

The party arrived at Kandos at 5.38 a.m. on the 5th November, and found Mr. H. Schröder, the Manager of the Works, on the platform, ready to receive them. They were escorted to the adjacent hotel, which formed their headquarters, and thence were conducted by Messrs. Kneeshaw and Schröder over the factory before breakfast, to the quarry during the morning, and to the dam and pumping station in the afternoon.

The preliminary information afforded was to the effect that Kandos Cement was made of limestone and shale in the proportions of 8 of limestone to 1 of shale; and that the Company was particularly fortunate in having unlimited supplies of both quite near to the factory, with its own coal-mine within a short distance, and an abundant water supply from the River "Cudgong."

The following description of the Company's activities was furnished by the Manager:—

### The Limestone Quarry.

The limestone quarry is distant  $3\frac{1}{2}$  miles from the works, and is served by two aerial ropeways, conveying respectively 120 tons and 40 tons per hour to the tipping gantry. The quarry presents a face up to 150 feet high and about 1,700 feet long, and as there is no overburden, everything shot down is sent for cement making. The stone averages 87 per cent. of calcium carbonate; it is dark blue in colour, with streaks of white calcite. The varied tints of the face were so absorbingly beautiful in the morning sunlight that the wish was expressed that a master of the brush, such as Mr. J. D. Moore, A.I.A., had been present, to transfer their counterfeit presentment to paper.

To win the limestone, large churn drills are used for primary drilling, which drill vertical holes up to 6 inches diameter behind the face, right down the 150 feet height of face and 5 feet further under the quarry floor. For a blast about 7 holes are drilled, giving a length of face of about 100 feet; the holes are filled with calculated quantity of gelignite, and fired simultaneously. Upwards of 45,000 tons of limestone are brought down with one blast, which great quantity is only sufficient to supply the works for 10 weeks at the present rate of output.

Any stone which is not broken by the blast sufficiently small for handling by the electric shovel, is broken further by secondary blasting, and the stone is then loaded by a 68c. Bucyrus shovel of the caterpillar type, which lifts 3 tons at a time into 10-ton quarry trucks, which are drawn to the crusher building by electric locomotives. The trucks are of a special side-tipping type (the tipping device being operated by an overhead electric crane), and they deliver to a travelling apron feed, discharging into a "Traylor" bull-dog jaw crusher, which has a jaw opening of 5 feet by 4 feet. This is the largest crusher in Australasia; its relentless swinging jaw, weighing 15 tons, crushes well over 300 tons per hour, reducing the stone to a 10in. gauge. It is belt-driven by a 200 h.p. electric motor, and the crushed stone from it delivers to a 48in. wide rubber belt to a Williams' swing hammer mill, and thence by a 36in. wide belt to the stone-loading hoppers.

The stone from the hoppers is loaded into buckets on the aerial ropeway, and is conveyed by them to the cement factory at Kandos, the buckets being automatically tripped as they travel over the limestone stock pile at the factory crushing station. From the stock pile, a travelling belt carries the stone to two gyratory crushers, which reduce it to  $1\frac{1}{2}$ in. gauge or under, and thence continuous bucket elevators convey it to the storage bin over the weighing station. This bin will hold about 300 tons of crushed stone, and it is constructed of reinforced concrete on reinforced concrete supports.

### The Shale Quarry and Mixing.

The shale necessary for the process is quarried from a hill about a quarter of a mile from the factory, and the required amount (practically 1 part shale to 8 parts limestone) is mixed in the weighing hopper, the mixture being conveyed thence by a belt conveyor to a bucket elevator, and thence to the rotary driers.

### The Rotary Driers.

There are two cylindrical rotary driers, constructed of  $\frac{3}{4}$ in. thick boiler plate, 60 feet long, and 5 feet

internal diameter, fitted internally with angle iron bafflers, which automatically throw the mixture towards central flames, which are continually travelling from end to end of the cylinders. These driers are set to a fall of  $\frac{3}{4}$  in. to the foot, and the mixture of limestone and shale, travelling downwards, meets the ascending gases, thus becoming sufficiently dry for the next process, which is that of fine grinding. The dried material is discharged into a bucket conveyor, which distributes it to the bins over the raw mills.

#### **The Raw Mills.**

These mills, of which there are four, are electrically driven, and they grind by the medium of steel balls. The battery of four mills consists of three mills 28 feet long, 6 feet diameter, each driven by a 350 h.p. motor, and one mill 28 feet long, 6 feet 6 inches diameter, driven by a 450 h.p. motor. The mixture of stone and shale is reduced by these mills to a very fine powder, known as raw mix, a proportion of over 87 per cent. of it being so fine that it will pass through a sieve having 40,000 holes to the square inch.

This raw mix or raw meal is stored in silos, and is thence fed to the rotary kilns.

#### **The Rotary Kilns.**

There are four rotary kilns, each 142 feet in length; one is 7 feet 6 inches, two are 8 feet, and one is 9 feet in diameter. The raw meal is heated by the kilns to a state of incipient fusion, and is turned out as "clinker" at the rate of 3,000 tons of cement per week. The kilns rotate at the rate of one-half of a revolution per minute; they are fired by means of powdered coal, blown in by fans; the temperature of their burning zones is about 2,500 degrees F. They shoot their hot clinker into bucket conveyors, automatically tipping their loads into hand-skips, which deliver to the stock pile.

#### **The Clinker and the Cement.**

The clinker pile is situated over a concrete tunnel, in which is a travelling belt conveyor, by means of which the clinker is carried to the cement department. Here are two very large combination mills, each 36 feet long by 6 feet 6 inches diameter, and each capable of turning out ten tons of cement per hour. A very interesting feature is the admixture of a small percentage of gypsum with the clinker previously to its entering the cement mills. The addition of gypsum serves to regulate the setting time of the finished product. From the cement mills the cement is elevated to the cement silos, whence it is extracted and delivered to the bagging machines.

#### **The Bagging Machines.**

There are two bagging machines, each capable of bagging ten bags of cement per minute, all completely

sewn up, with the exception of one corner at the top in each, where an opening about two inches in length is left for the insertion of the bagging machine tube. The cement is pumped through this tube, and on the bag being filled it automatically seals itself in by closing up the unsewn top corner. On reaching a definite weight, the filled bag automatically cuts off the cement supply from the machine, and is, at the same time, tipped off the machine on to a travelling belt conveyor, which transports the bags into railway trucks, in which it is stacked by the bagging crew.

#### **The Power Plant.**

The plant is thoroughly up-to-date. A battery of four Babcock & Wilcox boilers with automatic stokers, British Thompson-Houston turbines direct, coupled to electric generators, produce the electric power for the factory, quarry, and pumping station. Everything throughout this huge installation is driven electrically, all power being distributed from the one central power station.

#### **The Pumping Station.**

The pumping station is situated on the Cudgegong River, where a concrete dam has been constructed; but the water for the works is drawn from a waterhole, 35 feet deep, below the dam, and is pumped thence by electrically driven machinery, in wooden pipes, 15 miles to the factory power-house.

#### **Coal.**

Coal is produced from the Company's colliery, a few hundred yards from the factory power-house, the coal tunnel being 350 feet above the rail level. Coal of excellent quality is available, both for sale and for the use of the power-house and factory. It is delivered on to screens, the large stuff being loaded into railway trucks for despatch, and the small, after passing through crushing rolls, being delivered to concrete hoppers and thence by side-tipping skips hauled by an endless rope to power-house and factory.

#### **The Employees.**

Hot and cold baths are provided for the employees; an excellent system of safety guards is in operation; a first-class ambulance station is situated at the factory, and classes are regularly held for training in first-aid. The Company has provided an up-to-date ambulance waggon, by converting a 2-ton lorry for the purpose.

#### **Working and Testing.**

The machines run day and night. The men in the factory work in three shifts, of 27 men per shift. Great care is taken in testing the raw materials, the clinker and the finished product of which samples are taken every hour and examined in the chemical and physical laboratories. The most rigorous tests are



carried out for tension and compression in the finished article, which generally yield twice the strength required by the Government specifications. Kandos cement averages well over 5,500 lbs, per square inch under compression, on a mixture of one part Kandos cement to three parts of sand. Tensile expansion and boiling tests are conducted, as well as complete analyses of limestones, shales and cements.

About 500 men are employed at the coal mine, quarry and cement factory. The town of Kandos, which is in a thriving condition owing to the operations of the Company, supports a population of 2,500.

#### **Prospects.**

So great is the demand for cement, and so excellent the prospects, that the Company has already ordered a fifth unit, which will bring the capacity of the plant up to 4,000 tons of cement per week.

#### **Valedictory.**

After the dinner which was tendered to the visitors

in the evening, Mr. F. P. Kneeshaw proposed the toast of His Majesty, and then that of the Institute of Architects of N.S.W., which was responded to by Sir Charles Rosenthal (President), and by Mr. H. V. Vernon (member of Council). Also a toast to Professor Leslie Wilkinson, the first Professor appointed to the School of Architecture at Sydney University. Then Sir Charles proposed the health of Mr. Kneeshaw, who, replying in happy terms, brought Mr. Schröder in to accentuate the response. Mr. Kneeshaw made special mention of the fact that Mr. F. Oakden was the first general manager of the Company, and credited him with a large share in its present success.

The party returned from Kandos by the evening mail on the 5th, and reached Sydney in the early hours of the 6th, benefited by experience gained, by pleasant associations and by the glorious air of the Kandos Valley.

## Fire Underwriters' Association of New South Wales

### REQUIREMENTS RE INSTALLATION OF GAS-HEATING APPLIANCES.

#### **1.—Gas Stoves.**

**T**O be set on bricks securely bound together, tiles, slate, or reinforced concrete not less than 2 inches thick, with edges of such setting adequately protected against damage.

To be connected by rigid metal pipes and metal gas-tight joints.

#### **2.—Gas Rings.**

To be set on:—

- (a) Bricks, tiles, slate, or reinforced concrete as above.
- (b) Sheet iron or other non-combustible material, provided same be distant at least 2 inches from any woodwork, and must be stout enough, or with sufficient supports of non-combustible material, to sustain the weight without sagging.

To be connected by rigid metal piping and metal gas-tight joints.

#### **3.—Movable Appliances.**

In cases where movable parts of machinery require to be heated, or where the nature of the business demands the moving of gas-heating appliances, same may be connected by flexible metal tubing with approved metal gas-tight joints. Flexible tubing must be as short as possible.

#### **4.—General.**

Rubber joints or rubber tubing will not be allowed except by special permission. All appliances to be clear of inflammable material, and set as high above the floor as convenience will allow.

All woodwork within 12 inches of gas burners to be adequately protected by fibro-cement sheets or other non-inflammable material set at least 1 inch off such woodwork.

No heating appliances of unsuitable type or unsatisfactory installation will be allowed.

Royal Exchange, FREDERICK COX,  
C/r Pitt and Bridge Streets, Secretary.  
Sydney, 30th October, 1923.

# INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

## Annual Exhibition.

Dated 1st December, 1923.

**E**XHIBITION to be held in the Art Exhibition Room of the Education Building, Loftus Street, Sydney, from Monday, 3rd March, to Wednesday, 19th March, 1924, both days inclusive.

The Exhibition will be opened on Thursday, 6th March, at 3 p.m.

There will be no charge for admission.

### Conditions.

1. Any architect, painter, sculptor, designer in Applied Arts, or student in Architecture, may submit exhibits.

2. Exhibits are limited to work not previously exhibited at an Annual Exhibition of the Institute.

3. There will be an entrance fee of 2s. 6d., and same must be sent with each exhibit. Half the entrance fee will be retained in case of rejected exhibits. Students' work will be admitted free.

### Sections.

1. Designs for Public and Commercial Buildings.
2. Domestic Work.
3. Ecclesiastical Work.
4. Memorials.
5. Town Planning, Lay-out Schemes of Gardens, etc.
6. Models.
7. Sketches of Architectural Subjects (any medium).
8. Designs or Examples of Furniture, Stained Glass, Wallpapers, Metal Work, or other Applied Arts.
9. Sculpture, Wood Carving, Modelling, Metal Work.
10. Measured Drawings and Drawings of Buildings of Historical Importance.
11. Students' Work. (Limit to 12 sheets.)
12. Constructional Details.
13. Mural Decoration.

*Note.*—The above exhibits will include Scale Drawing and Models, Details, Perspectives, Photographs, etc., connected with such work. Explanatory plans should accompany elevations, perspectives, photographs, and models wherever practicable.

### General Conditions.

1. The Hanging Committee reserves the right to reject any work submitted.

2. Every work submitted must be signed. On the back of each exhibit must be pasted a label, stating:—

- (1) The section for which it is intended.
- (2) The title.
- (3) Name and address of exhibitor.

The above information must be repeated for the purpose of cataloguing on a tie-on label to hang over the front of the exhibit.

3. No copy of any kind will be admitted, except in Students' work. Measured drawings must be from actual measurements by the exhibitor, and original sketches may be suitably attached.

4. All drawings must be suitably mounted on stretchers or framed, and all to be subject to the approval of the Hanging Committee.

5. All rejected exhibits must be removed by the exhibitors within three days from notification of non-acceptance.

6. All exhibits must be removed by the exhibitors within three days after the close of the Exhibition. Country exhibits will be returned, provided that postage be sent to defray cost of same.

7. All drawings intended for exhibition must be delivered at the Institute's Rooms, 5 Elizabeth Street, Sydney, on or before Monday, 25th February, 1924. Delivery to be made between 10 a.m. and 4 p.m.

8. Every care will be taken of the exhibits, but the Institute will not be responsible for any loss or damage to same.

All communications must be addressed to Mr. H. C. Day, Hon. Secretary of the Exhibition Committee, c/o Institute of Architects, 5 Elizabeth Street, Sydney.

### THE COMMON ROOM.

The COMMON ROOM at the INSTITUTE OF ARCHITECTS is available for Arbitrations, Consultations and the like.

*Terms on application to the Secretary.*



## NOTABLE BEQUEST

### Model Residential Area.— Exhibition of Plans.

*Extract from "Sydney Morning Herald,"  
16th November, 1923.*

**A**N exhibition of plans for competition in laying out a model residential area, together with designs of suitable residences to be erected thereon, was held in Farmer's, Ltd., Exhibition Hall recently, and was opened by the Minister for Mines (Mr. Fitzpatrick).

Under the will of the late Mr. William Moore, a trust was created, and an area of land of 800 to 850 acres in extent was set aside to be utilised as model residential areas.

The competition for which the plans have been submitted was arranged by the trustees in respect of 120 acres situated about half a mile west of Gordon Station, in the Kuring-gai Shire, which they propose to be the first section to be dealt with in conformance with the testator's wishes. The trustees sought the advice of the Institute of Architects as to the best means to secure a suitable scheme, and the competition was adopted. It was divided into two sections, one for designs for the lay-out scheme and the other an architectural section embracing the residences and other buildings to be erected on the site.

Sir Charles Rosenthal, M.L.A. (President of the Institute of Architects), Professor Wilkinson (Professor of Architecture at Sydney University), and Mr. C. B. Thistlethwayte (Managing Trustee) acted as a jury to decide on the merits of the designs and plans.

The first prize in both sections was taken by Mr. R. Keith Harris.

Messrs. Wilson, Neave and Berry were second for lay-out, and Mr. L. C. M'Credie second for architecture.

A cottage plan submitted by Messrs. Weidner and Kaad, of Chatswood, was commended.

The main features of the winning lay-out design are the careful attention paid to existing approach roads. Mr. Harris has preserved a natural creek running through the property as a park way, with road treatment embracing central plantations. He has used the commanding sites for a school, church and community building, and a sports ground has been designed in the most suitable situation on the area, which is directly approached by the park way. Provision is made for this part of the estate to be linked up with the other parts and the district roads generally. There are 209 residences provided for in the scheme, with frontages ranging from 60 feet to 70 feet, and depths of from 150 feet to 180 feet.

The trustees aim, subject to legal sanction being

obtained and financial arrangements being completed in the near future, at completely developing the estate in sections by building the houses and disposing of them on completion section by section. Under the will of the testator the net annual revenue from the estate is to be divided between certain religious and philanthropic institutions in New South Wales.

Mr. Norman Pope, a director of Farmer's, Ltd., presided at the opening function, and Mr. Fitzpatrick congratulated all concerned on the success of the exhibition. Sir Charles Rosenthal said he considered the scheme placed first would produce a residential area far in advance for healthiness, convenience and beauty of anything hitherto achieved in Australia.

## Correspondence

RE CANBERRA.

352 Collins Street.

Melbourne.

19th November, 1923.

Memorandum to—

The Secretary of each State Institute of Architects.  
Dear Sir,

The Commonwealth Government has decided to launch an Architectural Competition for residences at Canberra.

The conditions of competition have been approved by me on behalf of the Federal Council, and your delegates to the Federal Council have been advised by me in detail in regard to the matter.

It has been intimated to me that the following competitions will probably be launched at reasonable intervals in consultation with the Federal Council of the A.I.A.:—

1. The above Residence Competition.
2. Artisans' Homes and Lay-out Competitions.
3. Administrative Buildings.
4. Federal Government Home.
5. The National War Museum (War Memorial).
6. The National Library.

Competition No. 1 will be announced in the Press within the next week, and the conditions of competition, site plans with contours, and all particulars, can then be obtained at the following addresses:—

1. Director-General of Works, Commonwealth Offices, Melbourne.

2. Commonwealth Works Director for New South Wales, Customs House, Sydney.
3. Commonwealth Works Director for Queensland, Desmond Chambers, Adelaide Street, Brisbane.
4. Commonwealth Works Director for South Australia, Selborne Chambers, Pirie Street, Adelaide.
5. Commonwealth Works Registrar for Western Australia, G.P.O., Perth.
6. Commonwealth Works Registrar for Tasmania, Customs House, Hobart.

We have had the promise of successive Federal Ministries that buildings of a permanent memorial character will be submitted to competition.

Would you kindly convey the above information or a copy of this memorandum by circular to all members of your State Institute, as it is desired that these competitions be as representative and successful as is possible?

Yours faithfully,

(Signed) K. A. HENDERSON,  
Acting President Federal Council  
of the A.I.A.

## Returned Correspondence

Letters sent by Secretary of Institute of Architects to the following have been returned "Not Known" or "Left":—

Allan Stafford, 53 Pine Street, Randwick.

L. C. H. McCredie, c/o J. & H. J. Kirkpatrick, Melbourne.

R. J. Collins, 12 Castlereagh Street, Sydney.

John Dunstan, 61 Market Street, Sydney.

Joseph Sykes, 76 Bridport Street, Albert Park, Melbourne.

J. Dawson, 152 West Street, North Sydney.

H. R. Mead, 92b Pitt Street, Sydney.

Will any member who is acquainted with the present address of any of the above, kindly supply same to the Secretary, 5 Elizabeth Street, Sydney.

## SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS AND THE 44 HOUR PROCLAMATION

TABLE OF HOURS, WAGES, ETC.

Trade.	Country. 48 hours.	City and Suburban. 46 hours.	Date when takes effect.
Bricklayers ..	2/4¼	2/5½	Nov. 16, 1923
Builders' Labourers— (State) .. ..	2/0½	2/1½	Oct. 12, 1923
(Federal 44 hrs.)	—	2/3¾	Nov. 2, 1923
Carpenters and Joiners .. ..	2/2⅞	2/4	Oct. 12, 1923
Wharf Carpenters	2/3⅞	2/4⅞	" "
Plumbers .. ..	2/2⅞	2/4	" "
Slaters .. ..	2/3½	2/4¾	June 22, 1923
Plasterers .. ..	2/3	2/4¼	" "
	44 hours.	44 hours.	
Painters .. ..	2/4	2/4	Nov. 2, 1923
		40 hours.	
Quarrymen .. ..	2/3¾	2/6½	May 25, 1923
Masons .. ..	2/5⅞	2/8	" "
	Hours.	Wages.	
Electrical Mechanics	48	2/1¾	April 27, 1923
Railway, Roads, Bridge, etc., Labourers .. ..	48	1/10½ and upwards	Oct. 12, 1923

Trade.	Country. Hours.	City and Suburban. Wages.	Date when takes effect.
Crane Drivers (Agreement) ..	48	2/8½	Sept. 21, 1923
Hoist Drivers ..	48	2/5½	" "
Builders' Carters	48	£4/7/6	Oct. 12, 1923
Machinists (Gen. Joiners) .. ..	44	£5/7/6 to £5/9/6	Nov. 2, 1923
Machinists (Labourers) ..	—	£4/8/6	" "

### Price of Materials.

Bricks (Common) at kiln, per 1,000 .. ..	73/-
Cartage of bricks to site (as per current rate)	
<b>Timber (Basic Prices)—</b>	
Hardwood, per 100ft. sup. .. ..	33/-
Oregon .. ..	31/6
Redwood .. ..	70/-
New Zealand White Pine and Rimu (6in. wide)	47/-
Richmond River or Hoop Pine .. ..	57/-
Cement, per three bags, according to quantity 20/- to 22/6	



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### MODERN PRACTICE OF VENTILATION

By George Vincent, M.I.H.V.E. (Eng.).

*(Continued from November issue.)*

#### Action of the Air Conditioning Plant.

The air entering from the fresh air supply direct passes into the spraying chamber through a wire register covering the whole sectional area of the inlet of the spraying chamber, passing through this inlet register which breaks this air up into minute streams, allows it to pass into the chamber in an equivalent manner. The air then meets with a complete mist of water produced by the battery of sprays. The action of the water sprays being uniform over the whole sectional area of the chamber, the whole volume of passing air is thus proportionately washed and cleaned. The number of these sprays is determined by a formula, and is in direct relation with the volume of the air being treated. The type of spray required is one with centrifugal action, enabling a large sized orifice to be used, thus preventing chokage of the spray head while still providing a complete mist of water.

The air then passes through the zig-zag spaces between the battery of eliminator plates, the first three sections of which are completely flooded from another battery of sprays fixed at the roof of the chamber. The action of these sprays is to flood these three sections with water, which still further increases the washing of the air in its passage through these spaces. The last three sections of the battery are provided with projection lips which remove the excess moisture, this moisture running down the vertical plates into the horizontal water tank. The further action of the plant in adding heat to the air, also humidity, will be shewn later in the following description of the plant.

The superficial area of the washing surface is determined by formula in respect to the cubic feet of air

passing into the plant. The same determination is also made in respect to the superficial area of the rear portion of the battery used for the elimination of moisture so that the success of the plant both in respect to the further washing of the air and the elimination of moisture is secured by the correct amount of surface being available. The whole volume of air after being thoroughly cleansed and cooled, and excess moisture removed is passed from the discharge end of the air conditioning plant to the suction inlet of the fan.

#### Correct Type of Ventilating Fan.

The function of the ventilating fan is the forcing of the air received from the air conditioning plant from the fan casing through the discharge outlet of the fan into and through the system of distributing ducts. In order to carry out this duty in an economical and satisfactory manner it is necessary in the case of fresh air supply systems to handle the volume of air with the least amount of power, and with the least amount of noise.

In order to carry out these two functions the fan should be chosen of ample size, and the speed at which it operates should be kept as low as possible. The running expense of the ventilation plant in the saving of power is all important. In order to handle the volume of air with the least amount of power, apart from the size and capacity of the fan itself, the system of distributing ducts should also be calculated to carry the volume of air with a least amount of resistance. By conforming to this rule the velocity through the ducts is kept low, which means that the system operates with the least amount of noise, and also prevents the setting up of draughts from the supply registers. It is a

Obtainable from Leading Builders' Merchants

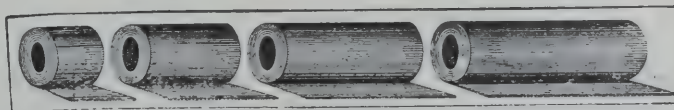
## "CRANE" BRAND LEAD DAMPCOURSE

Made to Special Requirements  
... of the New Building Act ...

Guaranteed a minimum weight of 2lbs. per super ft.

**G. E. CRANE & SONS  
LIMITED**

4½ Inch. 9 Inch. 14 Inch. 18 Inch.



IN ROLLS 20ft. LONG.

Made in Greater Widths or Thickness if required.

### A PERFECT DAMPCOURSE

Everlasting. Non-Corrosive. Not affected by Cement, Lime or Acids. No Joints. No Waste. No breakage. Quickly and easily applied Economical in use.

Head Office and Showrooms:— 33-35 PITT ST., Circular Quay, SYDNEY

common practice in many quarters in designing ventilation systems to keep the size of the fan small, to run the fan at high revolutions, and to maintain a velocity through a system of small discharge ducts in order to keep down the first cost of the system. It is easily seen that this practice is not economical nor can it produce satisfactory results, and many systems of ventilation are not kept in operation because of the noise associated with their use, the dangerous draughts set up from the registers, and the excessive amount of power employed in operating the fan.

With respect to the type of fan used there are now only two types of fans employed in operating mechanical fresh air supply systems, namely, the centrifugal steel plate, or paddle wheel type fan, and the centrifugal multivane fan. With respect to the former, the number of blades are small, they are of flat design and the characteristic action of the wheel is to set up excessive noise, and against ordinary resistances in the ducts does not possess the same volumetric efficiency as the multivane wheel.

With respect to the multivane wheel its characteristic is the employment of a large number of narrow blades, the number and width of these blades differing in the different classes of multivane wheels.

Multivane wheels can be divided into two classes: (a) the drum type, and (b) the conoidal type.

To more clearly indicate these classes of wheels and their different construction it may be advisable to say that the principle types of drum type multivane wheels are the Sturtevant and Sirocco. The original wheel, namely, the Sirocco, possesses 64 straight narrow blades which are secured at each end to a front and back plate. The back plate being also secured to the cast iron hub of the wheel. As the name signifies the exterior construction of the wheel is that of a cylinder or drum, the wheel having the same diameter from front to back.

With respect to the Sturtevant wheel; this wheel differs from the Sirocco mainly in the formation of the blades. The blades are the same number as the Sirocco, and also very narrow in width but are cup shape along their length, but in all other respects are practically the same as the other drum type wheel.

With respect to the Conoidal wheel; this is of entirely different character and of more modern design than the drum type wheel.

The external development of the wheel is that of a frustrum of a cone in which the inlet diameter is greater than the diameter at the rear of wheel.

The number of blades is 32, but the blades are very much wider than those of the drum type wheel. All blades are exactly alike and each form a frustrum of a cone with the smaller end secured to the front plate of the wheel (at the inlet end), and the broad end to the back plate which is also secured to the cast iron hub.

The principle types of Conoidal wheels are those used in the manufacture of the "Conoidal" fan "Buffalo" Forge Co., U.S.A., the "Keith" fan as manufactured by Keith Blackman Ltd., England, and the "Invincible" Fan manufactured at the writers works, Invincible Fan Works, Darlington.

The design of this wheel offers many advantages over the older drum type wheel. The curvature of the blades and their setting making for greater rigidity. The entrance of air from the suction inlet of the fan into the interior of the wheel is less restricted, flowing with less obstruction through the conical body of the wheel and along the conical shaped blades to the hub. The advantage secured is that the air is handled with less friction and shock, eddy currents are eliminated, and variable velocities are avoided. The principal practical characteristic of the operation of this wheel is the uniform velocity which is secured over the whole area of the discharge orifice of the fan.

#### System of Distributing Ducts.

Ventilation systems are for the most part successful or otherwise in respect to the design of the distributing ducts. One weakness in design has already been referred to, namely, in selecting the area of the ducts too small. Much experience and technical knowledge is an essential to the successful design of duct systems. The problem set is one of distributing a certain volume of air into the building in such a manner as to provide for its equivalent distribution without noise and without setting up draughts from the registers. The first essential is, therefore, the dividing up of the volume of air in an equalized manner throughout the whole building or portion of building to be treated. These volumes are determined by the amount of air to be supplied to each room or portion of building. These volumes are also calculated in relation to the number of people who will occupy any room or particular portion of building, or if the number of people is not ascertainable, then the amount of distributed air would be calculated on supplying a given number of air changes per hour. With respect to the amount of air to be supplied per person it has been previously stated

Phone B 3779

Phone Private. Hunter 335

### C. PEARSON SHAW

QUANTITY SURVEYOR

BOND STREET, CHAMBERS,  
2 BOND STREET, SYDNEY

Late Valuer City Properties for Federal Taxation Department.

## THE JOKER

Lives up to its name. Can't be beaten. Made in seven different Models, from a Chip Heater to a Hot Water Service Heater. Prices range from £5 to £40

BROOMFIELDS LTD. 152 SUSSEX STREET, SYDNEY. Tel. City 9780



that the standard is mostly taken at 1,800 cubic feet of air per person per hour, or 30 cubic feet per minute. Naturally this amount of air would differ in respect to different types of buildings, the uses to which buildings are equipped, and the number of persons proportionately occupying the building. With respect to air changes per hour these would be calculated at from 8 to 12 air changes according to the nature of the building, and the use to which the building is put. The total volume of air having been proportionately divided throughout the whole building and tabulated, it is then necessary to determine the velocity at which the air will enter through the various registers.

In the writer's opinion this velocity should not exceed under ordinary circumstances 360 lineal feet per minute. The relation of the velocity to the quantity of air passing through each register will give its sectional area.

The branch pipes leading from the registers to the sub-mains should not carry a velocity exceeding 600 lineal feet per minute and the sizes of these branches are determined from this velocity in relation to the volume of air passing through the branch.

These branches are connected to the sub-mains. The sub-mains are plotted so as to provide the shortest route along which the air shall pass, and the velocities in

these sub-mains should not exceed 1,200 lineal feet per minute. This velocity in relation to the amount of air passing through each section of the sub-mains will determine its sectional area. The sub-mains connecting to the mains which lead back to the discharge opening in the fan casing, and in respect to these mains the velocity shall not exceed 1,800 lineal feet per minute. This velocity in relation to the volume of air determines the sectional area of the mains.

Obviously an essential in design is the elimination of all possible resistance. All changes of direction are made with easy radius bends; all branches taken off mains, and sub-mains also being effected at an easy angle; the connection of branches to mains should not be made close to any change of direction in the duct. The point of connection should be at least 5 diameters from any change of direction.

To provide for the equivalent flow of air it is essential that fixed resistances should be made at each branch leading from mains. These fixed resistances being formed by contracting the branch duct at its entry to the main. The sectional area of these fixed resistances being determined by the velocity existing in the mains at the point at which the branch was taken off and the volume of air it is necessary to furnish through the branch.

## The Paint that Lasts Longest

The most expensive item in connection with paint work is the labour. It pays better to paint ONCE with the best paint than several times with inferior paint, or paint and varnish.

Please note that the only PAINT LIKE Ripolin is RIPOLIN—do not be put off with a substitute.

### Procurable from all Paint Distributors

Representative for Australia:  
**LINDSAY A. CORMACK**  
4 Underwood St., Sydney  
(Off 35 Pitt Street)

INTERSTATE AGENTS:  
Melbourne: LOUIS J. EGLETON, 379 Flinders Street.  
Adelaide: CLARKSON LTD., 124 Rundle Street.  
Brisbane: S. J. SQUIRES & CO. LTD., 171 Elizabeth Street.

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

## Materials Used in the Construction of Ducts.

Naturally the most convenient material that can be used in constructing ventilation ducts is that of plain galvanised sheet iron. This material possesses many advantages, being smooth, cutting out frictional resistance in the flow of air through the ducts, is very convenient in forming branches and bends, can be made air tight, and is very clean and sanitary.

In respect to modern buildings, especially those of extensive character, it is often found convenient to form the main distributing ducts in either concrete or brickwork and incorporate these in the original design of the building. Ducts constructed in this manner can be made thoroughly air tight, and if properly rendered with cement compote and finished with steel trowel, provides a fairly satisfactory inner surface. The various changes of direction and branches can be provided with the necessary radius, and ducts formed in this manner offer one advantage, namely, that they are not visible, and if properly constructed, provide a suitable means for conveying air. It has been previously stated that the air supply to a building should be raised in temperature during the colder seasons in order to avoid dangerous draughts being set up by the incoming air. This provision can be conveniently made as previously stated by the employment of a heating battery provided in the casing of the air conditioning plant and situated between the rear of eliminator battery and suction inlet of the fan.

The area and capacity of this battery are naturally related to the temperature of the heating agent and the volume of air required to be heated.

With respect to the heating agent this depends upon the class of building in which the ventilation system is being installed. Low pressure steam offers the most economical means of providing the heating agent, the provision of a cast iron sectional steam boiler with heating surface provided to give the necessary B.T.U.'s required at a maximum temperature of 5lbs. pressure is the most convenient apparatus, and can be fixed in the basement requiring only a flue from the fire box connected to a brick flue which can be provided in the building contract either in brickwork or in concrete.

The heating battery is provided in sections, each section being fed with steam through a branch from the manifold, each branch being controlled by a separate steam valve. The condensation is removed from

the sections of the heating battery through a similar manifold, and the main condensed waste led from the manifold back to the boiler, and the condensed water returned to same, or delivered over a gulley trap into the drainage system. Automatic control of the amount of heat delivered from the heating battery can be provided by a thermostat fitted in relation to the main delivery duct.

The temperature of the air in the duct should not be raised unduly, the temperature through the registers themselves not to exceed 75 degrees Fahr. in the case of residential buildings.

With the delivered air at this temperature the original constituents of the air are not destroyed and the air supply is not robbed to any extent of its natural freshness.

It has also been stated previously that humidity is necessary in delivering air to the building especially during the coldest season. This humidity can be conveniently provided by either injecting steam at low pressure through injectors into the standing water in the tank of the air conditioning plant. The action of the injected steam being to liberate moisture which is carried into the volume of air passing through the air conditioning plant. Another method of applying humidity in a convenient manner is that of providing steam coils in the same tank with steam supply to same and condensed waste from same, the heating up of the water by steam coils also liberating the necessary moisture.

The above description of a Modern Mechanical Fresh Air Supply System covers this matter as far as possible within the scope of this article.

## Mechanical Exhaust Ventilation Systems.

The removal of vitiated air from a building has been shown to be necessary in order to provide a sanitary and comfortable atmosphere. The volume of air to be removed can be most conveniently determined by a given number of air changes per hour. The necessary air changes per hour to provide satisfactory results obviously depends on the character of the building, the purposes it is used for, and the relative cubic capacity of the building in relation to the number of occupants.

It is usually found in practice that from 6 to 8 air changes are sufficient to provide the necessary results. This volume of air having been determined, it is necessary to divide this volume up in a proportionate



# STROMBERG-CARLSON

## Telephones and Letter Boxes for Vestibule in Flats



Write or 'Phone for Bulletin No. 2, which describes operation and illustrates various 'phones for use in each flat. :: We will design a system to serve you best.

**Sole Australian Representatives:—**

**L. P. R. BEAN & CO. LIMITED, 229 Castlereagh St., Sydney**

**Distributors:** BRISBANE—S. H. SMITH, 299 Adelaide St.  
ADELAIDE—CHARLES ATKINS & CO.  
LTD., Currie Street.

NEWCASTLE—P. SHARP (Electric Signals and Telephone Co.) 58 Maitland Road, Islington.  
BROKEN HILL—WHITE & HOSIER.

### DRAWING INSTRUMENTS

AT LONDON CATALOGUE PRICES.

**STANLEY'S New Series of Drawing Instruments**

Can be confidently recommended to all who prefer this type of drawing instrument.

They are all made entirely by British workmen, and their finish and precision are of unequalled excellence.

Needle Points fitted throughout, and the greatest care expended in their design to secure rigidity and lightness, easy and smooth movement of joints and adjusting screws.

Every instrument is expertly examined before despatch, and carefully set for immediate use.

**Set, as illustrated, consisting of:—**

Mahogany pocket case.

Compasses, 6 in. double jointed, with needle point and lengthening bar.

Divider, 5 in., with fine adjustment.

Bow Pencil, 3 in., double jointed, needle points.

Bow Pen, 3 in., double jointed, hinged nib and needle points.

Spring Bows, set of 3. Pen, Pencil and Divider, needle points and central adjusting screws.

Ruling Pens, 5 in., with hinged nib.

Ruling Pens, 5 in., new patent, swivel nib, and large indexed adjusting screws. Spare leads and needles.

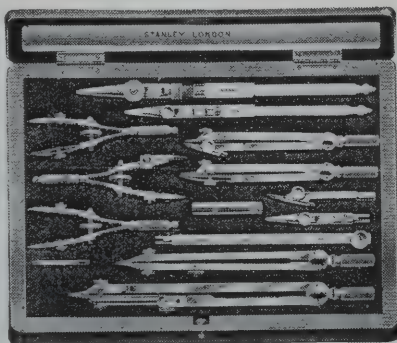
**Price of Complete Set, £7/7/-**

Set, as above, without Bow Compasses and Hinge to Nib of Small Pen, £5/-/- Being made by automatic machinery, all parts are standardized and replacements can be supplied at any time.

**FAIRFAX & ROBERTS LTD., Opticians,**

Agents for W. F. Stanley, London.

23-25 Hunter St., Sydney



## Architects Specify "LEDKOR"

(REGD.)

### The Bituminous Lead Reinforced DAMPCOURSE

Approved by the Board of Health, New South Wales.

Manufactured in 10-ft. lengths in 1, 2 and 3-lb. lead, as required. Widths 4½ inches up to 36 inches.

### We are Flat Roofing Specialists

BEFORE DECIDING GET OUR PRICE LAID FOR

## "ENTEE" Roll Roofing

Manufactured at Rosebery, Sydney.

— Quality Superior to Imported —

### Norman Turnbull & Co. Ltd.

167 CLARENCE ST., SYDNEY. Tel. City 2902

manner so that its equivalent removal from the building can be effected.

The same procedure in respect to installing of the duct system is followed as with fresh air supply. The number of exhaust registers are first ascertained, this number of registers having been calculated to remove the total volume of air from the various rooms or portions of the building.

The velocity at which the air can pass out of the building through these registers can be increased beyond that stated for fresh air supply systems. The only point that requires attention beyond that of resistance in the duct is the elimination of noise associated with the air moving into and through the ducts. The same procedure is also followed in respect to the selection of the sectional area of the branch ducts, sub-main ducts and main ducts; the determined velocity and quantity of air at each point determining the sectional area. The same necessity exists in respect to easy radaii at all changes of direction, and the same necessity exists for providing fixed resistances at connection of all branches to mains and sub-mains and the same conditions also exist in respect to the nature of materials employed in their construction.

#### Lavatory Exhaust Systems.

The sanitary advantage of mechanical ventilation in removing from lavatory blocks the characteristic odours emanating from the use of sanitary fittings and the general vitiation of the atmosphere has been recog-

nised for many years passed and has now become a standard practice.

The application of ventilation in this case is obviously that of mechanical exhaust system.

The ventilation machinery in modern buildings can be most conveniently provided for in the lift machinery room, or if this not in a convenient position, can be separately housed on the flat roof.

The machinery would comprise:—Centrifugal Multi-vane Fan operated preferably by being direct connected to electric motor, or alternately by belt drive from motor.

The exhaust duct connected to the suction inlet of the fan would be extended vertically down through lavatory block with possibly a horizontal connection from the fan suction inlet to the point where the main duct would be carried down vertically. This duct is usually provided in galvanized plain sheet iron and built into chase provided in the brickwork. Obviously this duct will decrease in sectional area as it passes through each respective storey of the building, and registers fixed at ceiling level of each lavatory block on each floor. In order to provide a maximum efficiency in the operation of these systems a register should be provided at skirting level of each floor as well as from the ceiling. This register in this position removes a great deal of the heavy vitiated air especially from stall urinals and W.C.'s and prevents same rising through the breathing zone.



## Wm. Docker's "Sun" Brand Varnishes for Every Purpose

"SUN" BRAND VARNISHES are thoroughly seasoned and rigidly tested before they leave the works, and it is because of the carefulness which is exercised in every process of their manufacture, that they have attained their present position of pre-eminence.

Their constant preference by varnish users is because they work so easily and are so thoroughly reliable at all times.

*Wherever Varnish is needed use "Sun" Brand for a lasting finish. Write for Free Sample of Eggshell Flat Varnish.*

## Wm. Docker Ltd.

Makers of Fine  
Varnishes and Enamels

Sydney, Melbourne,  
Brisbane







# The Magic Stick

IT is a slender Stick, seven inches long and a quarter-inch through. With its pointed end a spinner of yarns weaves a web of entangling fancy, or an artist pictures the lights and shadows of dancing waters and reedy banks.

With it an engineer throws an arch across a gaping gorge. An architect waves it and a colossal building rears its head above the surrounding chimney pots.

In market place and counting room, in strident factory and hushed school room, this magic stick aids countless folks to visualize and record their thoughts.

It is the ELDORADO PENCIL of The Joseph Dixon Crucible Company, of Jersey City, N.J., U.S.A. You will find it an ELDORADO of romance.

*Should you wish to know more about the ELDORADO PENCIL, if you will drop a line to "Dixon," Box 98, G.P.O., Sydney, you will receive, by return post, the Eldorado Booklet "FINDING YOUR PENCIL." Full of Good Points.*

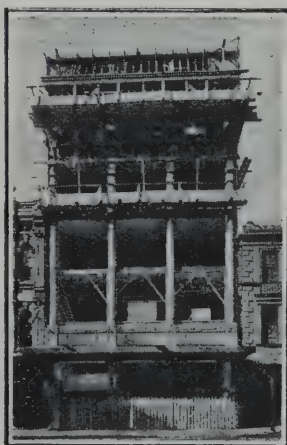
THE LEAD IS THE "HEART OF THE PENCIL."

## IRONITE stands for all that is best in FLOORS

*Guaranteed and Laid by*

HENRY HUGHES & CO. 23 ROSS ST., FOREST LODGE

Telephone: M 1586



Angus & Coote, George St., Sydney

## Indented Steel Bars

*The Ideal Concrete Reinforcement*

Rolled in Australia

∴

Designs Prepared by Experts

*One of the first all Reinforced Concrete Buildings constructed under the new Building Act.*

*Six stories high. Walls 6 inches thick throughout. Mould and Mack Walker, Architects. Williamson and McIntyre, Contractors.*

*Write for Illustrated Catalogue*

**WM. ADAMS & CO. LTD.**

SYDNEY, 175 Clarence Street  
MELBOURNE, 521-3 Collins Street  
BRISBANE, Cr. Edward & Mary Sts.  
PERTH, 33 King Street  
ADELAIDE, 96 Currie Street

With respect to capacity of these systems this is based on a given number of air changes per hour, and the standard practice is to provide a volume of air sufficiently to change the air contents 9 times per hour.

#### Basements.

There is perhaps no greater field for the exercise of the advantages of mechanical ventilation than that of removing the vitiated air and products of combustion, etc., from basements.

This fact is expressed in the Ventilation Laws. The only compulsory law in Australia, however, is formulated in the amended Building Act which provides for the compulsory installation of efficient mechanical ventilation systems in all basements when used as kitchens, cafes, billiard saloons, hair-dressing saloons and for any purpose in respect to the display and sale of goods.

With respect to capacity of these systems it is self evident that the capacity must be in relation to the purpose for which the building is used, and for general purposes basements can be efficiently ventilated by providing from 8 to 12 air changes per hour, but in respect to basement kitchens, where standard cooking plants are in operation, the volume of air removed from these kitchens should be sufficient to provide for from 15 to 20 air changes per hour. Obviously judgment and experience are necessary in determining the minimum volume of air that should be provided for and necessarily the cubic contents of the kitchen, in relation to the plant provided, materially affects the position. In kitchens where generous space is provided the air changes could be safely kept at the lower stated amount,

but in cases where the space provided is relatively small, which condition usually expresses a basement kitchen, the larger air change is essential to success. Experience is very necessary in respect to the design and construction of the various hoods required over the cooking plant. The ordinary style of large hood as provided over table range, carving tables, etc., is very ineffective and it is essential in order to properly remove the products of combustion over these fittings that the hoods should be of a composite character and also provided doubly jacketed so as to provide and maintain an effective velocity at the rim of the hood.

The construction of the hoods and ducts should be provided in plain galvanised sheet iron and the fixing of same provided with the hangers and clips hidden from sight as far as possible.

In order to provide an effective velocity at the hoods, it is necessary that the initial velocity at the fan should be kept reasonably high. The same argument exists here as in the case of all ventilation systems in respect to the matter of providing the ducts in small sectional areas and very high velocities, or in large sectional areas and low velocities. As above stated, however, in respect to these basement systems a reasonable velocity is an essential to success.

The only circumstance that needs special consideration in regard to velocity is in respect to the keeping down of noise. The ventilation machinery which should be preferably direct-connected, is usually housed in some portion of the basement premises. This is often essential as in most cases the basement tenancy gives no rights outside of the basement itself. With respect to the discharge of the heated and vitiated air from the fan casing, this is often a very difficult matter to arrange for satisfactorily. Obviously it cannot be discharged into a light-area, nor can it be discharged in any position where the ejected air can set up a nuisance owing to its odours and heat. It is usually necessary to extend the discharge duct up and outside the building and terminate same above the roof level.

Kitchen basement ventilation systems should in every case be kept as a separate unit and not connected with, or form a portion of any other system of ventilation. With respect to the ventilation of restaurants and cafes as distinct from their kitchens, the removal of a volume of air sufficient to provide from 8 to 12 air changes per hour is usually sufficient to provide satisfactory results.

In the writer's opinion it is further essential in dealing with basements, especially with restaurants and cafes, that a satisfactory system of forced fresh air supply should also be provided.

While it is possible to provide an atmosphere of reasonable purity by the installation of a mechanical exhaust ventilation system only it is also to be noted that the atmosphere, while reasonably pure, entirely lacks freshness. The operation of the exhaust system is to place the whole of the area being treated under a slight vacuum so that in addition to the air which is actually drawn from the basement itself, the inflow of air to take the place of the exhausted air is considerably accelerated through the various openings leading to the basement either from outside the building, or through staircases and other means of connection to the main

## STERLING EV-A-WHITE

THE SANITARY  
WATER PAINT  
THAT IS ALWAYS  
WHITE

NON-POISONOUS  
DOES NOT RUB OFF

Made in Australia

Sterling Varnish Co.  
SYDNEY AND MELBOURNE



building. This means that the air flowing into the building is drawn from a source which is either dusty or vitiated. The provision of a fresh air supply system, especially if an Air Conditioning Plant is included, provides an atmosphere of freshness and coolness which must be considered a satisfactory investment. In all cases where these systems have been provided for basement restaurants they have produced very satisfactory results, and maintained a standard of comfort especially during the summer months which is much appreciated by the patrons of the restaurant.

In conclusion the writer would emphasise the absolute necessity in respect to design of ventilation systems that this designing should be carried out by an experienced ventilation and heating engineer possessing both the technical knowledge and practical experience.

Many ventilation systems are rendered absolutely

useless by incorrect designing and execution, especially in relation to the design of the system of distributing mains, branches, and registers.

One great necessity exists in this City of Sydney in respect to ventilation practice, and that is for immediate legislation to make compulsory the installing of fresh air supply and exhaust systems to provide in a proper manner for the health and comfort of the occupants of the building and the general public.

It is a matter of everyday knowledge that the health of workers particularly is directly affected by bad air conditions in the buildings in which they are serving goods or manufacturing goods, and health insurance can be effected in the most satisfactory way by providing proper sanitary conditions in respect to the atmosphere in which workers are employed.

## FIBROUS PLASTER.

During the past few years the use of several materials has increased in building operations in this country, and one that is being extensively used at the present time is fibrous plaster.

Mascot, the makers of "Plasto" material, the writer was only too eager to penetrate the mysteries of the manufacture of this product.

"Plasto" is made from the finest grade of sisal hemp



Inside of Cobcroft's factory.

The Australian of to-day has the bump of curiosity well developed, so when the opportunity came to look over the works of C. V. Cobcroft, Botany Road,

and the best colonial plaster.

The hemp is first cut into lengths of about nine inches, after which it is passed through a teasing

## The MOTOR IN AUSTRALIA

THE MOTOR in Australia is not filled with dead matter lifted from the weeklies of Australia, Britain and America. It is bright and original from cover to cover, well printed in type that anybody and every body can read and profusely illustrated. It is a Magazine and a Trade Paper. Readers will find bright stories, photographs, pictures and fresh news.

FROM ANY BOOKSELLER IN THE COMMONWEALTH

Address: Northcote Chambers, 16 Pitt Street, SYDNEY

PRICE  
6<sup>d</sup>.

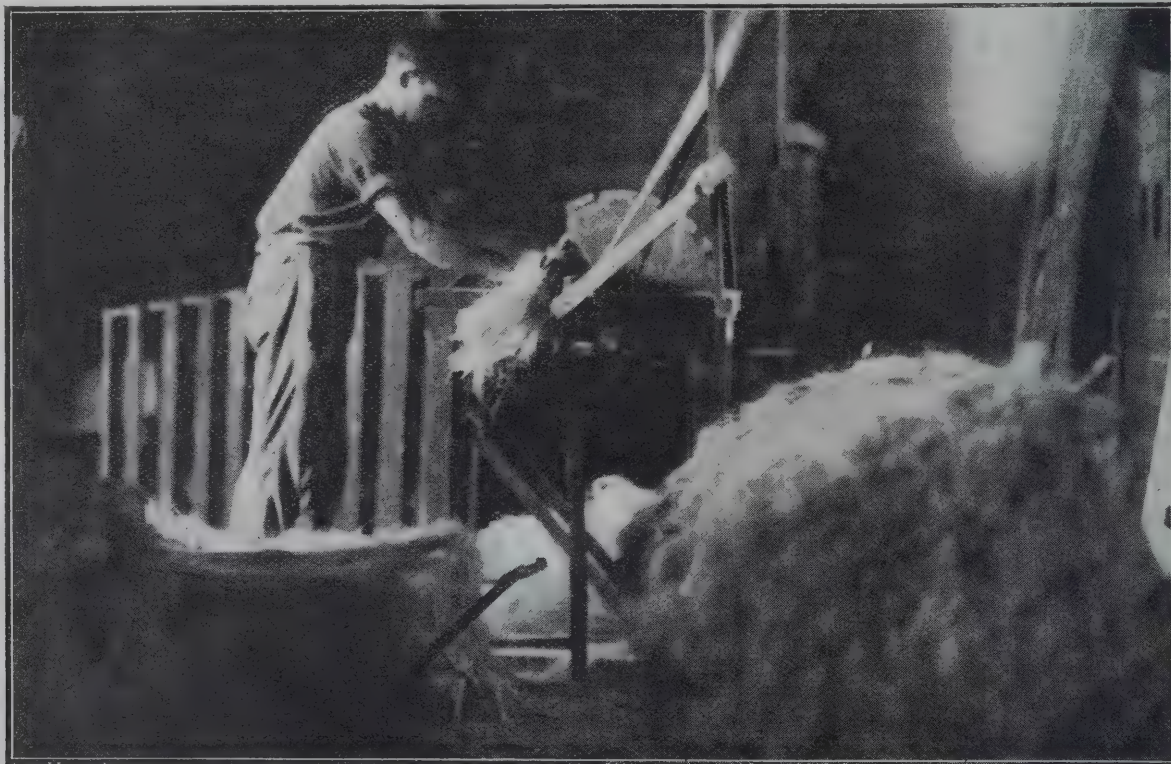


machine, from whence it goes to the workers. At times the hemp contains impurities that would have a deleterious effect on the plaster, and to overcome this it is first thoroughly washed; but as a rule the hemp is of such good quality that this is not needed.

In that part of the factory where the sheets are

the men are all experienced. Whilst the first sheet is setting another one is being prepared, and by the time a third one is finished the first sheet is ready for removal to the drying sheds.

"Plasto" sheets are dried under natural conditions, as the firm considers that natural drying, although it



Cutting the Fibre.

made, each workman looks after three tables. These tables usually have glass tops. After having fixed the dimensions of the sheet to be made, the operator makes the plaster to the desired consistency and then spreads it over the table. This is one of the most critical stages in the process, as everything depends upon the con-

takes longer, is far preferable to artificial drying, as it gives better results.

In addition to making sheets, cornices and beadings to the architect's design are turned out. At an early date the firm will be equipped to execute detail work of a decorative or floral design as required, the ser-



Cobcroft's works, showing drying sheds.

sistency of the plaster. The hemp is then placed in the plaster until the right amount is mixed therewith to make a sheet of the desired quality. There is no rule of thumb to guide the mixer, who has to depend on his own experience in this matter. This is one department in which the firm is in a fortunate position, as

vices of two modellers having been obtained.

Although the business has only been in operation for about two years, it has already earned a reputation for the quality of the material turned out, and the demand is increasing so rapidly that the firm has doubled the plant, and additional drying sheds are being erected.



THE MOST  
ATTRACTIVE AND  
ENDURING  
OF ALL FINISHES

LEADLESS  
NON-POISONOUS  
SANITARY  
AND WASHABLE



**WHITE AND COLOURS**

"Velure," made by the English House of C. Chancellor & Co. Ltd. whose name is known throughout the world for the super-excellence of its products, we can with confidence claim that for use on land and sea, indoor and outdoor, there is no better paint made than "Velure."

*Obtainable of all Architects' Supply Houses in the City and Suburbs*

also Melbourne, Adelaide, Brisbane and Newcastle

*Sole Agents: D. O. RAMSAY & Co., No. 4 Bridge St.*

**Wholesale Only**

**Telephone City 2523**

NOT THE CHEAPEST BUT LEAST EXPENSIVE  
ITS SECRET IS ELASTICITY

Mr. C. V. Cobcroft commenced operations in Sydney in 1919 as the N.S.W. representative of Messrs. Fairlie & Sons, Ltd., Maryborough, Queensland, who specialise in high grade joinery of Queensland timbers. The fibrous plaster business is under the capable management of Mr. A. Sayers, who has an extensive experience of all fibrous plaster work.

Amongst others, the following jobs have been completed or are in course of completion by C. V. Cobcroft:—Ceilings in the Royal Arcade, Sydney Woollen Mills Building, in York Street; Tennis Club Buildings, Double Bay; Highland Society's Building, Phillip Street; Angel Hotel, George Street; T. & G. Buildings, Elizabeth Street; Rydalmere Mental Hospital; Kenmore Mental Hospital, Goulburn; and the Memorial Halls at Moree and Chatswood.

Notwithstanding reductions in price of "Plasto," one standard has always been maintained, *i.e.*, the best.

"Plasto" to-day is being specified by most of Sydney's leading architects: the surest indication of its quality.

#### THE INDUSTRIAL FILM.

It is beyond question that one of the best methods of educating the coming generations is by a greater use of the moving picture screen. This was brought home to the writer in a very forcible manner recently when he had the opportunity of viewing a private screening of a film showing the manufacture of Armco Ingot Iron.

Architects who specify, and builders who handle, this material, have little idea of the intricate processes that take place before the iron ore is manufactured into the product which they use so frequently. The educative value of this film lies in the fact that the user of the various Armco products realises after he has seen the picture the care that is taken in manufacture. The repeated tests that are made during the progress of the raw materials through the factory tell him exactly why Armco products are of such high quality.

The film was intensely interesting, and even one who has been through some of our leading factories in this country cannot but express wonderment at the work performed by machinery. It is as though the machines were alive with an intelligence superior to that of the average human.

Any of our readers who have seen the tapping of a steel furnace will realise the difficulties of the operators who took the pictures, but the most marvellous picture of all is that showing the molten metal at a temperature of 2,800 degrees Fahr. One could keep on describing the various processes from the electric magnets used for lifting the pig iron to the rolling of the iron bars, but space does not permit it. The best way is for the reader to see the film itself.

We understand from Messrs. Jones and Joseph that the film is on its way to Melbourne, Adelaide, and Perth, but in the course of a month or so it will be back again in Sydney.

Box 2613 G.P.O., Sydney.  
Telephones: B 6741, B 6742.

Works: KANDOS.

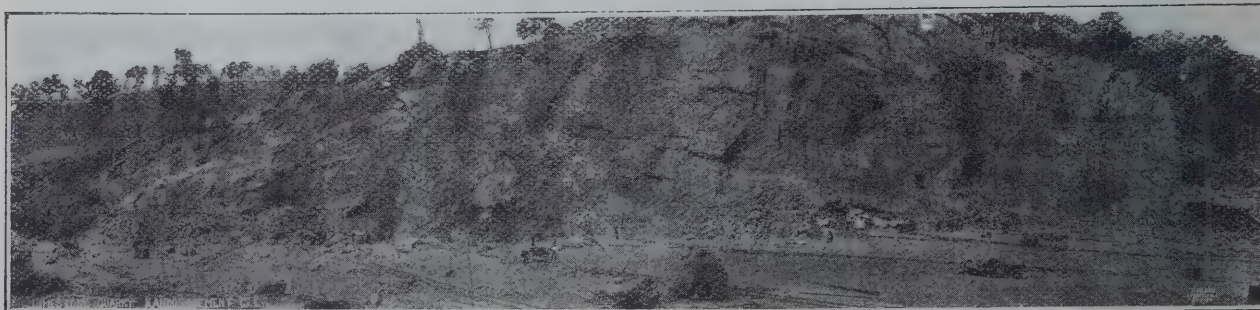
Telegraphic and Cable Address:  
"KANDOE," SYDNEY.

Codes:

A. B. C. 5th Edition. Western Union



Registered Office:  
**PERPETUAL TRUSTEE CHAMBERS**  
39 Hunter Street, SYDNEY



**VIEW OF LIMESTONE QUARRY, CARWELL CREEK, KANDOS**



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### ROOFING AUSTRALIA'S INDUSTRIES.

#### *Growing Popularity of "Fibrolite" Corrugated Asbestos Cement Sheets.*

Taking into consideration that "Fibrolite" corrugated asbestos cement sheets are comparatively a new roofing material on the Australian market, its progress, and the large extent to which it has already

qualities as a roofing material won instant recognition and the demand for the material that immediately followed could not at that time be met by the manufacturers. It was only by making extensive additions to the Company's big works at Camellia, New South Wales, and erecting large and modern works at Burswood, Perth, W.A., that the manufacturers have been able to cope with the demand in the past year. We



Austral Bronze Co., Sydney, roofed with "FIBROLITE" Asbestos Cement Slates and Corrugated Sheets.

been used, is amazing. In considering the vast number of buildings roofed with "Fibrolite" asbestos cement corrugated sheets in Australasia, the Pacific Islands, Java and the Straits Settlements, it is interesting to note that the Asbestos Slate and Sheet Manufacturing Co., Ltd., first commenced manufacturing "Fibrolite" just a little over six years ago. Its many valuable

qualities, however, that the capacity of the works has now been increased to such an extent that orders for any quantity of material can be met at short notice.

Not only in Australasia is Asbestos Cement Corrugated Roofing being very extensively used. In England, America, France, Italy, Austria, Switzerland and Germany, it has been largely used for many years past,

Obtainable from Leading Builders' Merchants

### "CRANE" BRAND LEAD DAMPCOURSE

Made to Special Requirements  
... of the New Building Act ...

Guaranteed a minimum weight of 2lbs. per super ft.

**G. E. CRANE & SONS  
LIMITED**

4½ Inch.

9 Inch.

14 Inch.

18 Inch.



**IN ROLLS 20ft. LONG.**

Made in Greater Widths or Thickness if required.

### A PERFECT DAMPCOURSE

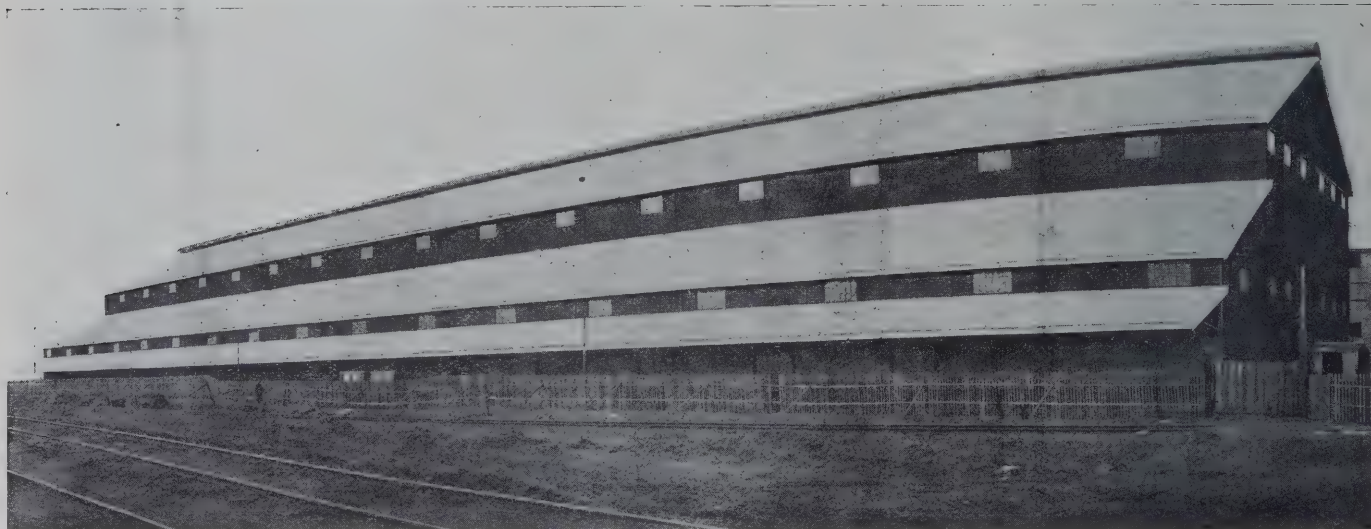
Everlasting. Non-Corrosive. Not affected by Cement, Lime or Acids. No Joints. No Waste. No breakage. Quickly and easily applied. Economical in use.

Head Office and Showrooms:— **33-35 PITT ST., Circular Quay, SYDNEY**

and by sheer force of service, superiority and economy, it is gaining even greater preference. Huge quantities of this material have already been used by both the British and French Governments.

The rapidly increasing popularity of "Fibrolite" as a roofing material for industrial works, factories, public buildings, large stores, etc., is reflected in the fact that a very large staff of fixers is kept constantly employed in roofing new buildings and re-roofing old

tains a large number of un-retouched photographs of big industrial works, factories, public buildings, schools, hospitals, theatres, stores and other types of buildings, roofed with "Fibrolite" Asbestos Cement Corrugated Sheets. Messrs. James Hardie & Co., Ltd., will be pleased to forward a copy of this album to manufacturers or others who contemplate building new works or re-roofing their old buildings. The album will be found both useful and interesting.



Australian Fertilizer's Pty., Ltd., works, Port Kembla, N.S.W., where over 100,000 square feet of "FIBROLITE" Asbestos Cement Corrugated Sheets were used for roofing to combat severe conditions of sulphurous fumes, and sea-air. This building is 460 feet long by 140 feet wide.

buildings with "Fibrolite" Asbestos Cement Corrugated Sheets, previously roofed with materials of a less permanent nature. It should be added, however, that in addition to the large amount of fixing undertaken by James Hardie & Co., Ltd., the greater portion of "Fibrolite" Corrugated Sheets is fixed by labour employed by the purchasers.

Messrs. James Hardie & Co., Ltd., Sydney (sole selling agents for the manufacturers), have published a handsome loose-leaf album or catalogue, which con-

"Fibrolite" Asbestos Cement Corrugated Sheets are manufactured solely from the best Australian Portland cement and specially selected asbestos fibre. The sheets are made on a laminated process, being built up layer by layer like the leaves of a book. The indestructible asbestos fibre is evenly interwoven throughout, ensuring uniform toughness and strength. The cement "sets" around the asbestos fibre, which reinforces the sheets or slates in the same manner as interwoven steel rods or wires reinforce a concrete wall. This "setting" or crystallisation goes on for years, the material all the while growing harder, tougher and more impenetrable. "Fibrolite" is therefore a permanent roofing material, being impervious to the ravages of time.

It is interesting to note that asbestos is older than any life on earth—it is one of the most marvellous products of inorganic nature. It has survived the fiercest test of Nature's laboratories—centuries of flaming heat—proving beyond question that it is

Phone B 3779

Phone Private. Hunter 335

**C. PEARSON SHAW**  
QUANTITY SURVEYOR

BOND STREET, CHAMBERS,  
2 BOND STREET, SYDNEY

Late Valuer City Properties for Federal Taxation Department.

**THE JOKER**

Lives up to its name. Can't be beaten. Made in seven different Models, from a Chip Heater to a Hot Water Service Heater. Prices range from £5 to £40

**BROOMFIELDS LTD.** 152 SUSSEX STREET, SYDNEY. Tel. City 9780



immune to fire. It is unchanged by high temperature. Immune to rust, rot, heat or cold, this unique mineral possesses an unparalleled aggregation of properties which make it absolutely self-maintaining. Called by mineralogists "asbestos," the name in its Greek form, "aoBeotos," signifies unquenchable, inextinguishable,

Charlemagne is supposed to have entertained and mystified his guests by committing his table covers, "asbestos," to the flames. The earliest-known source of supply was the Italian Alps, and the mineral was experimented with in the time of Napoleon the First. In 1866 practical results were obtained by the Italians.



Portion of large works at Messrs. Metters, Ltd., Sydney, where over 200,000 square feet of "FIBROLITE" Corrugated Sheets have been used for roofing, owing to the immunity of "FIBROLITE" from acid and sulphurous fumes. Over 100,000 square feet of "FIBROLITE" Flat Sheets have been used by Messrs. Metters, Ltd., for walls, etc. In a letter to James Hardie & Co., Ltd., Metters Ltd. state: "'FIBROLITE' Asbestos Cement Corrugated Roofing is now always used by us in place of iron. We find there is no sweating at the joints, with the result that no corrosion takes place. Some of the 'FIBROLITE' has been up for over five years and is as good to-day as when it was put on."

inconsumable. It is unaffected by oxidising influences. The oxygen in the air and water, that has so great a destructive effect on organic and metallic materials, leaves asbestos unaffected. Asbestos has been known since the time of the early Romans. It is mentioned by Marco Polo in the thirteenth century, and even

To-day asbestos is being mined in Australia, and large quantities of the specially-selected fibre are being used in the manufacture of "Fibrolite."

Portland Cement was used by the Romans more than 2,000 years ago in work which is still in perfect preservation. To-day it is successfully used in all classes



Portion of Sydney Harbour Trust Wharves, Sydney, where over 200,000 square feet of "FIBROLITE" Asbestos Cement Corrugated Sheets were used for roofing. All ridges and hips are covered with "FIBROLITE" Ridging.

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**496-504 HARRIS STREET, SYDNEY**

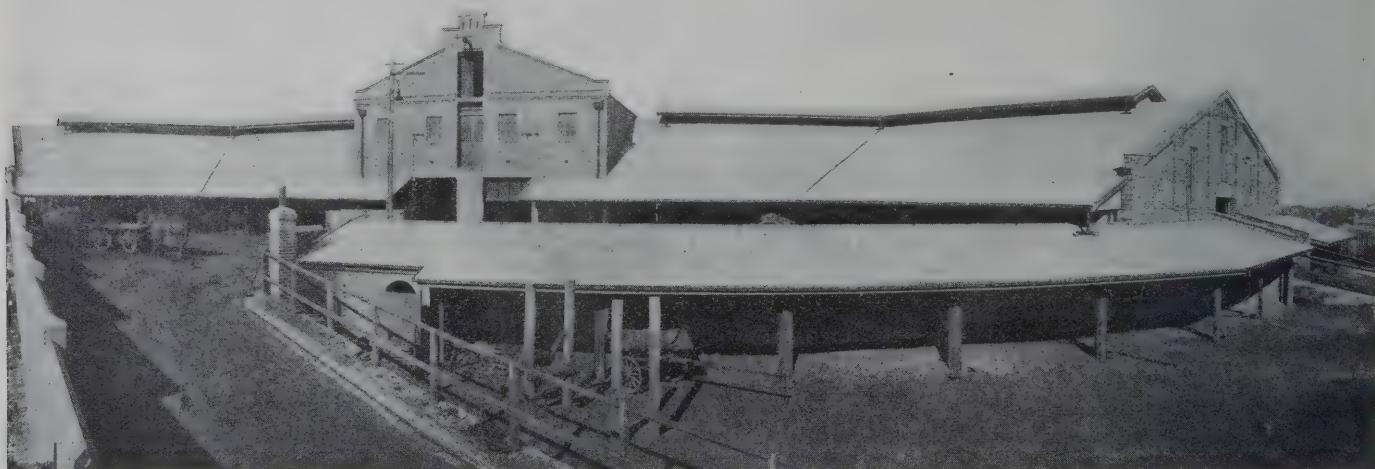
**Tels. M 1922, M 1923**

of structures where the essential requirements are strength, durability and fire protection. Under exposure to weather it grows harder and tougher. Engineering authorities agree that the crystallising or setting action of cement continues for many years. This means that it continually improves in strength and durability.

"Fibrolite" Asbestos Cement Corrugated Roofing requires no costly protective coatings, and is guaranteed rust proof, as it contains absolutely nothing to rust, rot or corrode. It is proof against the destructive

pounds. "Fibrolite" counteracts the effects of unequal temperature changes. It is practically noiseless during heavy rains or hail storms. It keeps buildings warm in winter and cool in summer.

One of the major features of "Fibrolite" corrugated roofing is that it is unaffected by sea-air. It is owing to the immunity of "Fibrolite" asbestos cement corrugated sheets from the destructive action of sea-air that it has been used so extensively on buildings adjacent to the sea. This was one of the deciding factors with the Sydney Harbour Trust Commissioners



Buildings for Colonial Sugar Refining Co., Ltd., Sydney, where over 30,000 square feet of "FIBROLITE" Asbestos Cement Corrugated Sheets have been used for roofing. "FIBROLITE" Ridging was used for all hips and ridges.

effects of oxygen in the air. It withstands the action of acid fumes, alkalies, gases, smoke, steam and dampness.

Another important feature is that there is practically no condensation with "Fibrolite." Being a natural insulator of heat and cold, it reduces condensation, at the same time insulating against electrolysis. These are facts that are not generally considered seriously by buyers, although they should be big factors for consideration in determining the class of material to be used for roofing buildings which cost thousands of

in using "Fibrolite" for roofing the majority of their largest wharves. On one of these wharves alone over 200,000 square feet of "Fibrolite" was used.

"Fibrolite" asbestos cement corrugated roofing is fire resistant and is accepted by the fire underwriters at lowest risk. This is a big item for consideration by manufacturers, as there is always a greater risk of conflagrations by fire in industrial centres than in residential areas.

On the question of cost, it is interesting to note that "Fibrolite" corrugated sheets compare favourably in



## The Fuller Calculator

A 500" SLIDE RULE in Portable Form



The most efficient instrument in existence for STATISTICAL and TECHNICAL CALCULATIONS.

For Calculations involving  
MULTIPLICATION, DIVISION,  
PROPORTION, PERCENTAGES,  
POWERS, RECIPRICALS,  
LOGARITHMS, ROOTS

It will be found quicker to work than the most expensive Calculating Machine, and its accuracy ample for most technical calculations, as answers are usually found up to four figures.

The instrument may be used upon its stand as in the illustration, or without it.

PRICE:

Stanley's London  
Catalogue £7 10 0  
Plus 15%  
importing  
expenses £1 2 6  

---

£8 12 6

Fairfax & Roberts Ltd., 23-25 Hunter St., Sydney

Sole Agents in N.S.W. for W. F. Stanley & Co. Ltd., London

Architects Specify

## "LEDKOR"

(REGD.)

The Bituminous Lead Reinforced  
DAMPCOURSE

Approved by the Board of Health, New South Wales.  
Manufactured in 10-ft. lengths in 1, 2 and 2-lb. lead,  
as required. Widths 4½ inches up to 36 inches.

We are Flat Roofing Specialists

BEFORE DECIDING GET OUR PRICE LAID FOR

"ENTEE" Roll Roofing

Manufactured at Rosebery, Sydney  
— Quality Superior to Imported —

Norman Turnbull & Co. Ltd.

167 CLARENCE ST., SYDNEY. Tel. City 2902



Decorative repairs

last longest  
and look best  
when done with

# 'RIPOLIN' PAINT



'RIPOLIN' is known all  
the world over as the  
Paint which Beautifies,  
Protects and gives the best  
results always.

Supplied in White and 52 Artistic Tints.

Procurable from all Paint Distributors  
or from

## L. A. CORMACK

Factory Representative

4 UNDERWOOD ST. (off 35 Pitt St.) SYDNEY

Telephone B 3284

INTERSTATE AGENTS:

Melbourne: LOUIS J. EGLETON, 379 Flinders Street,  
Adelaide: CLARKSON LTD., 124 Rundle Street.  
Brisbane: S. J. SQUIRES & CO. LTD., 171 Elizabeth Street,

price with the best grade 24 g. galvanised iron, really the only material with which an authoritative comparative cost may be made as a guidance for buyers. It must be taken into consideration, however, that the purchase price of roofing material is in many cases but the beginning of roof outlay. The cost of the roof is not the price alone. It is the price, divided by the number of years that the roof actually gives in service. It is quite a common thing in manufacturing centres to see large roofs being constantly repaired or painted. Heavy annual maintenance costs in painting or other protective coatings, replacement of rusted or corroded sheets, and many other upkeep expenses are entirely eliminated where "Fibrolite" corrugated sheets are used for roofing. The first cost with "Fibrolite" is the last cost. It constantly improves with age, growing harder, tougher and stronger under exposure to weather and service conditions.

A new era in roofing was marked by the coming of "Fibrolite" asbestos cement corrugated sheets, and it is safe to predict that before many years it will be generally accepted as the standard roofing material for industrial works and factories.

"Fibrolite" is wholly manufactured in Australia from specially selected Australian raw materials and by Australian labour. The capital employed in the Company's operations is also purely Australian. "Fibrolite" therefore merits the full support of all Australian manufacturers.

### RIPOLIN PAINTS.

Architects and builders are familiar with the well-known trade mark of Ripolin Paint, the three men, the first painting the wall with the second man painting on the back of the first and the third painting on the back of the second. This trade mark has been the inspiration of many cartoonists in England, and we have received from Mr. L. A. Cormack, of 4 Underwood Street, Sydney, the factory representative of Ripolin Ltd., a circular showing a few political skits of their famous poster.

The company has brought out a new and attractive colour card which shows the beauty and variety of this world-famous paint.

The Glidden Company of America manufacture Ripolin under a royalty from the formulae of the company. In order that prospective buyers will get a better idea of what Ripolin will look like when the job is completed they have originated a process which is practically "printing with paint." Thirty-two solid colours are shown at one impression and the actual paint is used in printing samples on the same press with ordinary ink. In this manner a four page illustrated letter is prepared and supplied to their dealers.

A feature of Ripolin paint is its wonderful pliability and elasticity, which is demonstrated in "The Ripolin Film." These films are of Ripolin painted on glass and then removed. Samples of these films are shown in a neat little folder distributed by the company.



## Wm. Docker's "Sun" Brand Varnishes for Every Purpose

"SUN" BRAND VARNISHES are thoroughly seasoned and rigidly tested before they leave the works, and it is because of the carefulness which is exercised in every process of their manufacture, that they have attained their present position of pre-eminence. Their constant preference by varnish users is because they work so easily and are so thoroughly reliable at all times.

*Wherever Varnish is needed use "Sun" Brand for a lasting finish. Write for Free Sample of Eggshell Flat Varnish.*

## Wm. Docker Ltd.

Makers of Fine  
Varnishes and Enamels

Sydney, Melbourne,  
Brisbane

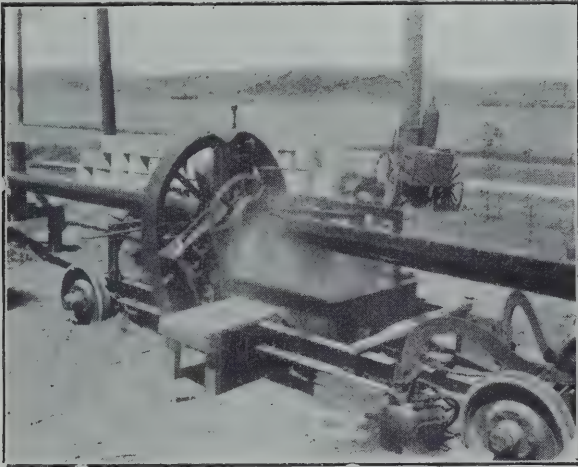




Ripolin is giving satisfaction in all directions and some of the new jobs on which it is being used at present are given herewith:—Dados on all walls and woodwork of the additions to the Women's Hospital, Crown Street, bathrooms at the Astor Flats, whilst 154 gallons were delivered to a shipping company engaged in Island trading.

#### PREVENTING CORROSION OF STEEL PIPES. (By F. M. Prince.)

Since the corrosion of metal piping can take place only through water or moisture or acid obtaining access to the surface of the metal, the problem of protection against corrosion appears to be merely that of devising a perfectly waterproof coating applied to the pipe in a manner as nearly perfect as possible.



The Pipe covering after leaving the Coating Tank, is shown in the process of being applied. With the agency of cogs, the Pipe is rotated and propelled.

In the West of America, where there are hundreds of miles of steel piping in use for irrigation purposes and for conveying oil, experiments with coverings for the protection of metal pipes have been conducted on an elaborate scale and results are distinctly in favour of felt base bituminous covering and of machine application. Formerly, the large percentage of this covering was applied by hand. While good results can be obtained by hand application if care is exerted, yet poor application of the material is possible on a portion of the work and results from a protective standpoint are correspondingly decreased.

The accompanying illustrations are of a Pabco Portable Pipe Wrapping Machine, which will give a general idea of how the covering is applied by machinery and also how the pipe looks after it is covered. The

machine in these photographs handles pipes up to and including 8-inches in diameter and is patented by The Paraffine Companies, Inc., but either the machine itself or plans are available for the use of those wishing to apply Pabco Pipe Covering.

This new machine can be transported to the place where the pipes are being used, with the result that the covering is not injured through excessive handling. Felt Base Pipe Covering is used very extensively by makers of rivetted steel pipes in America and has given wonderfully satisfactory results.

The Lindsay Strathmore and Terrabella Irrigation Projects in the San Joaquin Valley, California, have something in excess of 150 miles of various sizes of covered steel pipes in use giving excellent service with practically no maintenance cost. On the contrary, asphalt dipped pipes laid a year or two previously in the same section have failed in many places and have been replaced with felt base covered pipes. Stephen E. Kieffer, consulting engineer, of San Francisco, was in charge of this work.

## *Velure* The Most Elastic Paint Made

TO suit all purposes, including Railway Carriages, Tramway Cars, Offices, Hotels, Hospitals and the Higher Class Dwellings.

Recent works include Buckingham Palace and Windsor Castle, Australia House, London, and Hotels Carlton and Australia and "Wigram House."

VELURE will not crack, chip nor blister, and has a wonderful covering capacity. Specify VELURE for your new architectural works, and have a lasting and high-class finish.

OBTAINABLE FROM  
G. E. CRANE & SONS  
and All Paint Supply Houses

# IRONITE stands for all that is best in FLOORS

Guaranteed and Laid by

## HENRY HUGHES & CO. 23 ROSS ST., FOREST LODGE

Telephone: M 1586

This method of covering is now being adopted by water and gas companies and it is estimated that it will save tremendous sums of money in maintenance and replacement costs. Recently it was put in operation on a new gas line, which is being installed from Sausalito to San Rafael, California, by the Pacific Gas & Electric Co., and gave a thoroughly satisfactory demonstration of its adaptability for this type of work.

The materials used under the general heading of Pabco Pipe Covering consist of:—

# STERLING EV-A-WHITE

THE SANITARY  
WATER PAINT  
THAT IS ALWAYS  
WHITE

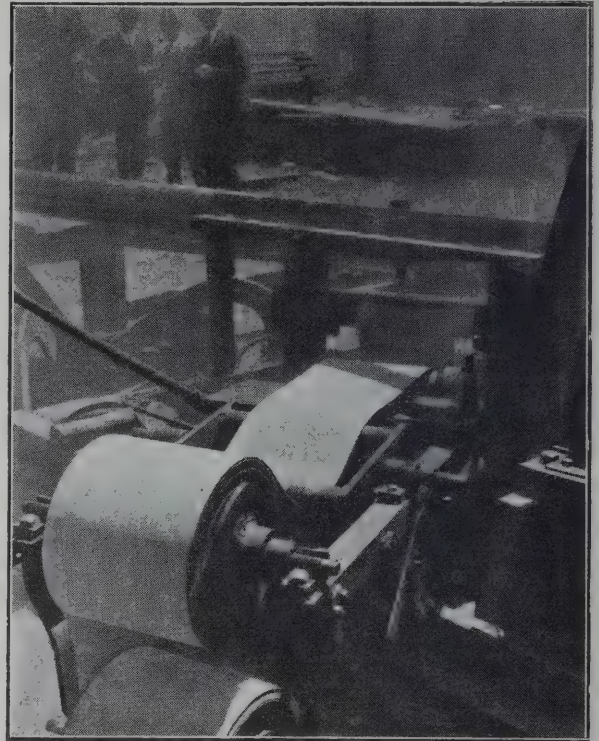
NON-POISONOUS  
DOES NOT RUB OFF

Made in Australia

Sterling Varnish Co.  
SYDNEY AND MELBOURNE

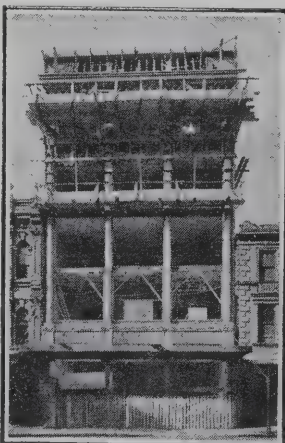
*Pabco Bituminous Primer.*—The Primer is applied by hand to the pipe to ensure a satisfactory bond when the hot floatine is applied. The covering capacity is approximately 175 square feet per gallon.

*Floatine.*—A specially refined pure Californian asphalt that is heated and used for cementing the pipe



Illustrating the Pipe Covering passing through Coating Tank, after which it is wound spirally round Pipe.

covering (felt base) to the pipe and for coating the outside of the covering. Approximately one half pound of Floatine is used per square foot of pipe protected. The material has a high degree of elasticity and tenacity



Angus & Coote, George St., Sydney

## Indented Steel Bars

*The Ideal Concrete Reinforcement*

Rolled in Australia

∴

Designs Prepared by Experts

*One of the first all Reinforced Concrete Buildings constructed under the new Building Act.*

*Six stories high. Walls 6 inches thick throughout. Mould and Mack Walker, Architects. Williamson and McIntyre, Contractors.*

*Write for Illustrated Catalogue*

**WM. ADAMS & CO. LTD.**

SYDNEY, 175 Clarence Street  
MELBOURNE, 521-3 Collins Street  
BRISBANE, Cr. Edward & Mary Sts.  
PERTH, 33 King Street  
ADELAIDE, 96 Currie Street



# A COMPLETE PRINTING SERVICE

*Planning, Designing, Writing, Printing, Engraving*

ALL UNDER ONE ROOF

A Service every experienced buyer of Printing will welcome and upon which every inexperienced buyer may safely rely. A Service made possible by the unparalleled Mechanical equipment and Working efficiency of every department. You have only to call, or write, outlining your wants, and we will submit samples and quotations on anything and everything connected with printing.

## THE MOTOR PRESS OF AUSTRALIA LTD.

NORTHCOTE CHAMBERS, 16a PITT STREET, SYDNEY. — Phone B1219

Telephone City B 3772

### JEFFRIES & DUNNINGHAM

QUANTITY SURVEYORS

Walter Jeffries  
J. C. Dunningham

N.Z. Insurance Buildings  
79 Pitt Street,  
Sydney

Tel. B 1906

### CHAS. A. HARDING & SON

QUANTITY SURVEYORS

Fifth Floor,  
Gibbs' Chambers,  
Martin Place

JOHN HARDING

Telephone: B 3565

### LONEON & HOCKING, Ms.Q.S.A.

QUANTITY SURVEYORS

16-20 Bridge St., Sydney.

MR. F. MORTON HOCKING

Estab. 1885

### J. ANDERSON WOOD & SONS

QUANTITY SURVEYORS

Pitts Building  
476 Collins Street  
MELBOURNE  
Phone, Central 5810

Union Bank Chambers  
68½ Pitt Street  
SYDNEY  
Phone, B 3932

## “PLASTO” THE SUPERFINE FIBROUS PLASTER SHEET

C. V. COBCROFT, London Bank Chambers, Sydney.

Phone B 1462

and ensures a satisfactory bond between the covering and the pipe. It also furnishes protection to the covered pipe.

*Pabco Pipe Covering, Felt Base.*—A special, water-proof felt pipe covering that is applied spirally to the pipe. Furnished in various widths, depending on the size of the pipe that is to be wrapped.

The estimated costs in California for various sized pipes, including labour and materials, are as follows:—

2-inch,	4½	cents	per	lineal	foot
4 "	5½	"	"	"	"
6 "	7½	"	"	"	"
8 "	10	"	"	"	"
10 "	11½	"	"	"	"

On the Pacific Gas & Electric job above referred to, the Engineer reports that the capacity of the machine on 6-inch pipes, 40 feet long, was approximately 750 lineal feet per hour, and under favourable conditions a pipe laying crew can lay from 600 to 800 feet per day, from which it will be seen that the machine is by no means a slow worker.

#### CALCULATIONS MADE EASY.

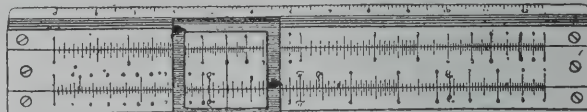
In preparing plans and specifications, architects have to perform numerous mathematical calculations and to make this work simpler many use a slide rule. The result of these calculations depends on the carefulness with which the slide rule has been constructed. The graduations are so fine that the slightest error will have a very great effect on the calculations made by

the user. For this reason it is necessary for the architect to have a slide rule that can be relied upon.

Messrs. W. F. Stanley & Co., Ltd., the well-known surveying and drawing instrument makers of London, have gained a reputation for constructing standard scientific instruments, and the slide rule illustrated herewith enhances the reputation already earned by this firm.

The Stanley slide rule has several advantages over the pre-war types. The portion carrying the upper or "A" scale is attached from the back of the rule by

Slide Rules for Calculation.



screws, and is adjustable, so that a perfectly smooth movement, free from any shake, is obtainable under all conditions of wear and climate. The cursor is of an improved frameless design in which the usual metal parts at the sides are dispensed with, so that no portion of the figures or graduations are hid from view. This simplifies the reading and lessens the possibilities of error.

Messrs. Fairfax & Roberts, 23-25 Hunter Street, Sydney, are the agents for Messrs. W. F. Stanley & Co., Ltd., and carry a large stock of scales, protractors, stencils and every class of scientific instrument.

Box 2613 G, P.O., Sydney.  
Telephones: B 6741, B 6742.

Works: KANDOS.

Telegraphic and Cable Address:  
"KANDOE," SYDNEY.  
Codes:

A. B. C. 5th Edition. Western Union



Registered Office:

PERPETUAL TRUSTEE CHAMBERS

39 Hunter Street, SYDNEY



VIEW OF LIMESTONE QUARRY, CARWELL CREEK, KANDOS



## Building Materials and Craftmanship

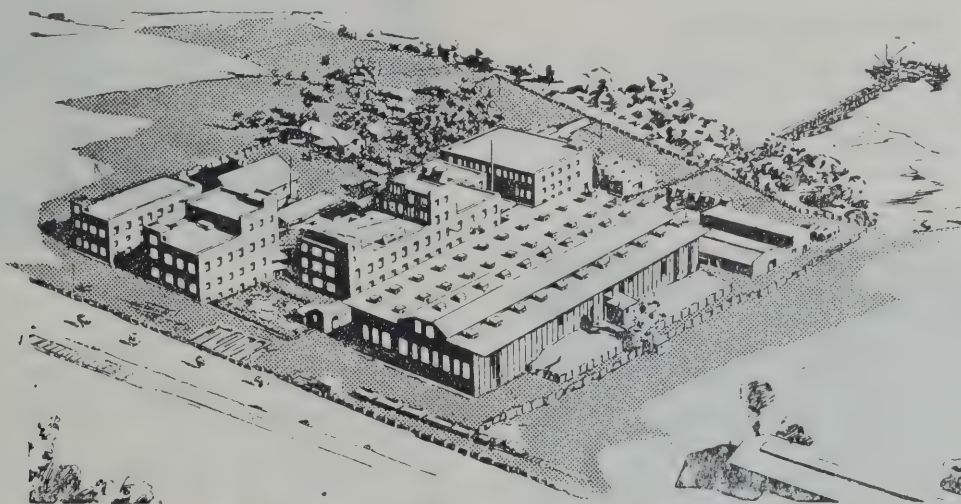
*The whole of the information in this section is supplied by the firms mentioned.*

### VISIT TO THE BERGER FACTORIES.

(By One of the Party.)

On February 14th a number of the fellows and associates of the N.S.W. Institute of Architects, at the invitation of Messrs. Lewis Berger and Sons, paid a visit of inspection to that firm's paint and white lead factories at Rhodes. The party of about 30, which was headed by Sir Charles Rosenthal, the newly-elected President of the Institute, and included Mr. Nangle, the head of the Technical College, and one or two other non-members of the Institute, motored to Rhodes in

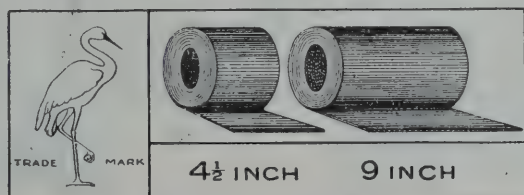
supplied in a specially pure form from Broken Hill, is turned into white lead by what is known as the old Dutch process. This process has, with slight variations, been in use almost from prehistoric times, and though slow—it takes 110 days to carbonise the lead—is found to give better and surer result than any of the other methods which have been experimented with from time to time. The lead is first cast into buckles about the size of a large saucer, these buckles are packed into earthenware pots containing a little acetic acid and packed into huge stacks with layers of tan



Lewis Berger & Sons' Factory at Rhodes.

the morning and was received at the works by Mr. H. B. Sevier and Mr. J. A. Young, the Directors of the Australian Company. Breaking into small parties, they were then shown over the works and spent a couple of instructive hours inspecting the Lead Corroding House, the White Lead Mills, the Paint Mills, the Test Laboratory and other departments of the factory. To most of the visitors the centre of attraction was the Corroding House, where the pig lead,

bark alternating with the layers of the lead filled pots. After three or four months of exposure to the acetic acid and the fumes given off by the fermentation of the bark and the natural heat caused by the fermentation, it is found that the lead is practically all carbonised and has become a crumbling mass of white lead. Then follows a complicated series of operations involving the use of very costly plant to grind the white lead into the finest powder, separate it from all im-



### IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

### A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20 ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight.  
Superior, and costs less than cutting from Sheet Lead.  
No trouble. No waste.

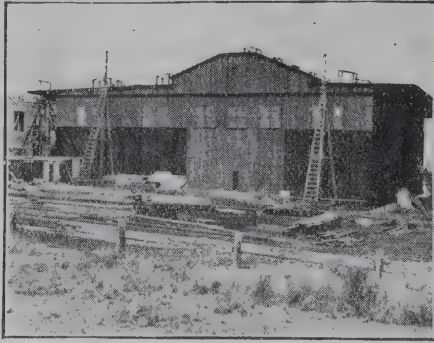
Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.

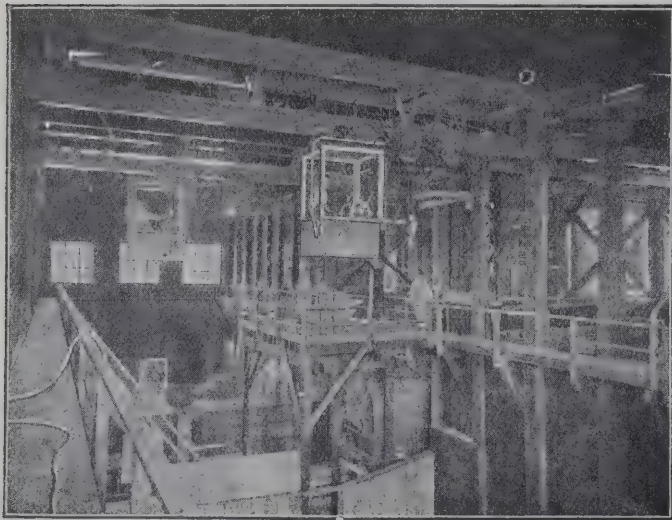


purities and mixing it with oil ready to be canned and matured for six months or more before being placed on the market. It was noted by the visitors that by the use of up-to-date enclosed machinery the danger



The Corroding Building.

of white lead poisoning to those engaged in the works is almost entirely obviated. It is only when the lead is being removed from the corroding stacks that there is any possibility of contact with the white lead powder, and masks are worn and other precautions taken by those engaged in that part of the process.



The Interior of the Corroding Shed.

Great interest was also shown in the Test Laboratory, which is furnished with an ultra violet ray apparatus, one of the very few if not the only one, installed in Australia. Exposure to this ray produces the same chemical effects in a few hours as are produced by years of exposure to ordinary sunlight, and its use

enormously simplifies the work of testing colours for durability.

After the inspection the party was entertained to luncheon in the dining-room provided for the use of the clerical staff. Mr. H. B. Sevier, thanking the guests for their visit, spoke briefly of the progress made by the Company since it first established its works in Australia. The further progress, he said, rested largely in the hands of their visitors. He was sure that, after seeing their plant and the care taken in all



A Lead Stalk.

the processes of manufacture, the architects would realise that their one desire was to produce goods that could be depended upon to give satisfaction to the user. He proposed the health of their President, whom he warmly congratulated upon his election.

Sir Charles Rosenthal in reply said it had long been an obsession of his to do everything in his power



In the Milling Room.

to encourage Australian industries. If the war had taught them anything, it was that Australia must be self-contained, and manufacture herself from her raw materials the goods she needed instead of importing them. When they saw a work of this kind in which a

Phone B 3779

Phone Private. Hunter 335

**C. PEARSON SHAW**  
QUANTITY SURVEYOR

BOND STREET, CHAMBERS,  
2 BOND STREET, SYDNEY

Late Valuer City Properties for Federal Taxation Department.



# *The* **Ornamental Steel Manufacturing Company Limited**



We are Craftsmen in the Manufacture of  
**ORNAMENTAL STEEL GATES**  
**ENTRANCE DOORS AND RAILINGS**  
**COLLAPSIBLE GATES**  
 Lift Enclosures :: Lift Cages  
 Grills and Tenants' Boards

Also Specialists in the Construction of  
**Steel Ferneries**      **Cantilever Awnings**  
**Conservatories.** **Fireproof Motor Garages**  
 and All Descriptions of Ornamental Steel Work, for which we  
 are prepared to submit Designs and Estimates Free of Cost

*Registered Office-- Corner of*  
**Redfern and Castlereagh Streets, Redfern**  
*Telephone Redfern 77*

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

vast capital had been sunk and which gave employment to hundreds of Australian workpeople they could not but feel that it was their duty as patriotic Australians to do what they could to support such an enterprise. In addition to the people directly employed in this industry it gave employment to many others engaged in industries dependent upon and interwoven with it. He, himself, always made a point of specifying for the use of Australian-made materials whenever they came up to the requisite standard, and, without any wish to push the products of this particular firm, he felt that this was a practice which from patriotic motives should be followed by all Australian

architects. He proposed the health of their host, and called upon Mr. Kent as one of the oldest and most respected of Sydney architects, to support him.

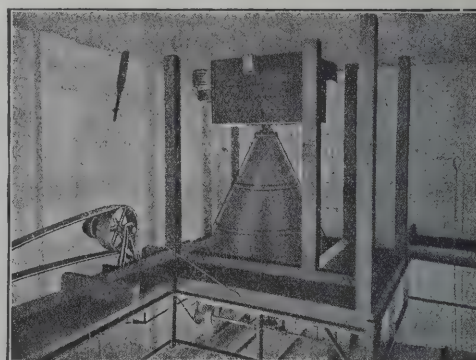
Mr. Kent in his speech spoke enthusiastically of the "absolute perfection" of the plant and organisation they had just inspected. He fully concurred with what had been said by their President as to their duties to encourage the use of Australian-made materials. With regard to white lead this had at one time been a difficulty. White lead like good wine required to be matured before use, and at one time it had been placed on the market too soon after manufacture. That, he was glad to see, had now been rectified as the Company had accumulated sufficient stock not to send out any white lead until it had been kept several months in store.

## STERLING EGG SHELL FLAT VARNISH

FOR FIRST-CLASS FINISH

## ART-A-FEC FLOOR VARNISH FOR HARD, GOOD WEARING FINISH

**Sterling Varnish Co.**  
ALEXANDRIA



A Section of the Paint Department

Mr. J. A. Young, who responded, expressed his appreciation of what had been said by Sir Charles Rosenthal and Mr. Kent. He asked his guests whenever they had any complaints or suggestions in their minds not to hesitate to make them. The firm would welcome any suggestions that might occur to architects or builders as the fruit of their experience. His aim was to manufacture the kind of materials that would give the most satisfaction to those that used them.

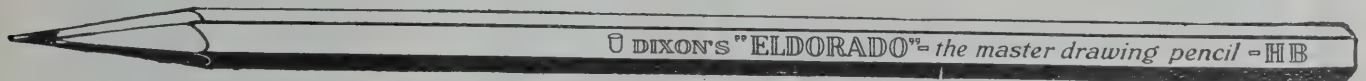
The members of the party motored back to Sydney early in the afternoon feeling that they had spent a most interesting and instructive morning.



It requires fifty-three steps extended over eight months to bring each

# Eldorado Pencil

to perfection. Hence they cannot be sold below Sixpence each or 5/6 per dozen—that should be the price at all stationers.



FOR PURPOSES OF INTRODUCTION ONLY, we will, for the sum of One Shilling in stamps, post you THREE ELDORADO PENCILS—select your own degrees, soft B to 6B, firm F, Hard H to 9H—also a segment of Dixon's Eclipse Pure Para Pencil Erasing Rubber and that clever Eldorado Booklet, "Finding Your Pencil."

THIS OFFER OPEN TILL MARCH 31

Write \_\_\_\_\_ "Dixon," Box 98 G.P.O., Sydney

## STROMBERG-CARLSON

Telephones and Letter Boxes for Vestibule in Flats



Write or 'Phone for Bulletin No. 2, which describes operation and illustrates various 'phones for use in each flat. :: We will design a system to serve you best.

Sole Australian Representatives:—

**L. P. R. BEAN & CO. LIMITED, 229 Castlereagh St., Sydney**

Distributors : BRISBANE—S. H. SMITH, 299 Adelaide St.  
ADELAIDE—CHARLES ATKINS & CO.  
LTD., Currie Street.

PERTH—T. MUIR & CO., 99 William Street,  
BROKEN HILL—WHITE & HOSIER.

## DO IT WITH TILES.

(By Mr. Francis Moulton in "The Architect".)

The tile idea has got beyond the bathroom idea. Their use has penetrated shops, theatres, living apartments and hotels, and has even been adopted as exterior wall covering, or revetment, for all manner of modern edifices, from churches to railway stations, not always with just appropriateness, it is true, but always as a result of honest, sincere effort toward an economic gain.

In London, Berlin, Paris, Vienna and New York the vogue is growing day by day, largely in their use on a big scale interpolation, but there is no reason why the individual house designer and builder might not insert here and there a passing whiff of this very decorative and cleanly constructive element in a scattered rather than a continuous profusion.

Italy has adopted and adapted the old Roman brick and tile vogue, though, for the most part, Italian decorators have imitated the Venetian mosaic glass or other mosaic—which is but a step aloof, in effect at least, from the tile idea.

France, more deeply grooved in tradition, though no less profoundly steeped in ancient lore, has made a lesser use of tile, but before the war even it had begun to make its impress and lend its unusually brilliant note of colour, above all in the south of France, along the shores of the Mediterranean, as indeed through the Mediterranean countries, in the shape of the rich red hexagon and octagon floor tiles, or *moellons*, as a super hygienic floor covering.

Once again, as in most things, we have to go back to China for the real impetus first given to porcelain tiles as an accessory of the living room. But it is in Spain that the most celebrated of porcelain apartments, so to call them, came into being—porcelain tiles, medallions, lozenges and panels, floors, walls and ceilings.

The most remarkable example is that of the Buen Retiro at Madrid, to which may be coupled the famous apartment in the Palace of Aranjuez. Both were the result of a notable Spanish revival of what may be called "architectural porcelain" in the 18th century. Charles III., King of the Two Sicilies—then reigning monarch of Spain—installed 50 artisans in what was virtually a royal porcelain factory at Madrid, and the finest possible results were soon achieved in the production of porcelain plaques or tiles, in white, gold and colours, the final disposition of this entire product being for the use of the royal apartments of the king and his court.

The ideal use of the tile is found in what is accepted as the classic Moorish house, as seen to-day throughout North Africa, in most cases but little departed from the ancient and mediæval models of which the present may be a copy. The French Residency at Algiers is an example of this, a better one being the various Sherifian palaces of Morocco. Almost any legitimately described Moorish house, whether it be mediæval or modern, will display the typic characteristics almost inviolably pure.

Perhaps the chief characteristics are the floors and walls, the revetment, often including the ceiling, of these constructive details, so to say. Unlimited possi-



Decorative repairs  
last longest  
and look best  
when done with  
**RIPOLIN**  
PAINT

A PAINT READY FOR USE  
on Wood, Metal, Plaster, Stone,  
etc.

RIPOLIN  
TRADE MARK

**'RIPOLIN'** is known all the world over as the Paint which Beautifies, Protects and gives the best results always.

Supplied in White and 52 Artistic Tints.

Procurable from all Paint Distributors  
or from

**L. A. CORMACK**

Factory Representative

4 UNDERWOOD ST. (off 35 Pitt St.) SYDNEY

Telephone B 3284

INTERSTATE AGENTS:

Melbourne: LOUIS J. EGLETON, 379 Flinders Street,

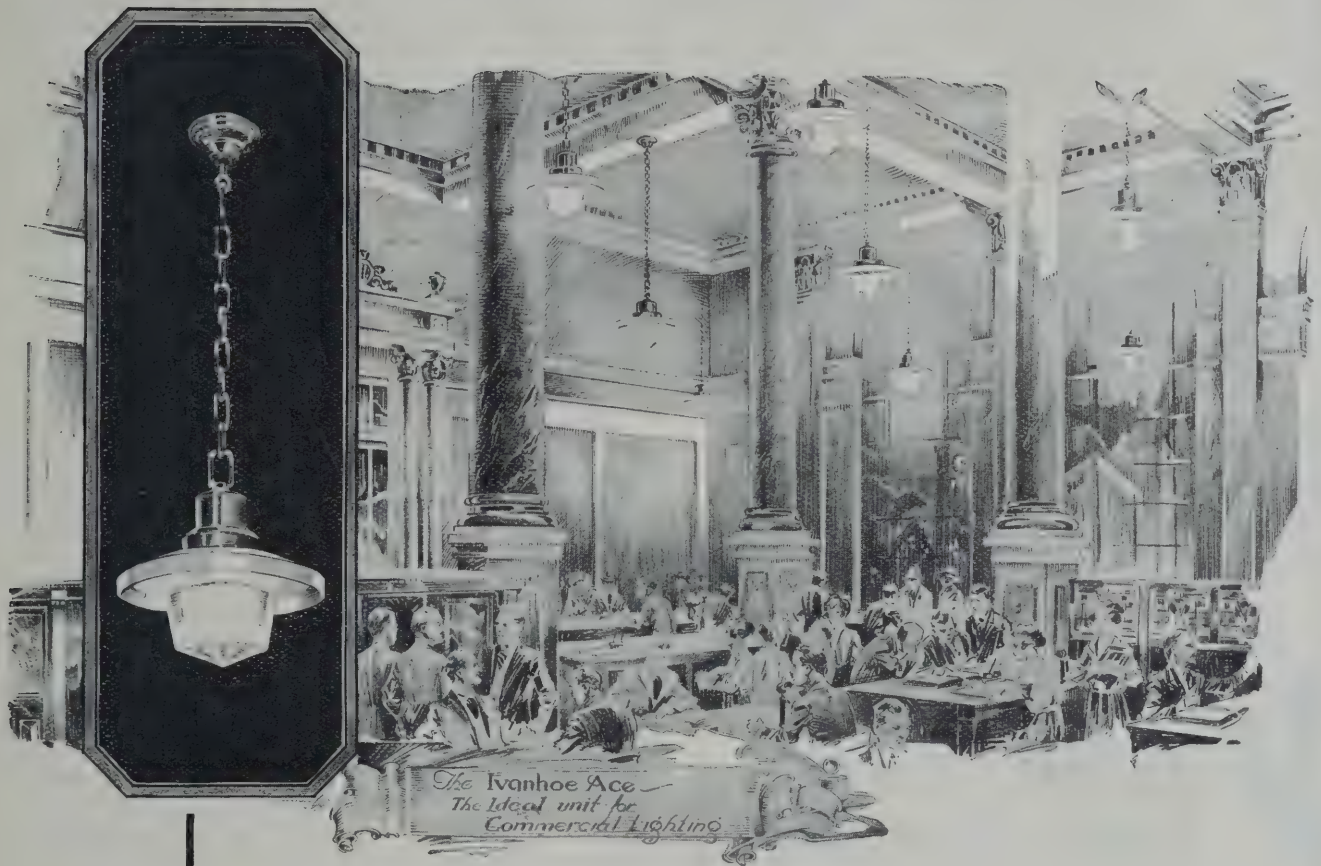
Adelaide: CLARKSON LTD., 124 Rundle Street,

Brisbane: S. J. SQUIRES & CO. LTD., 171 Elizabeth Street,



# IVANHOE ACE

*Suitable for Many Locations*



An *enclosing* unit for commercial lighting, efficient, specially suited for Banks, Stores, Offices, Hotels, Churches and Theatres. Pleasant in appearance—Contour eliminates cross reflections. Where illumination both above and below the mounting place is required the IVANHOE ACE is the ideal unit.

*Illustrated Booklet Mailed on Request*

The Australian General Electric Co. Limited

Corner Goulburn St., and Wentworth Avenue, Sydney  
and Corner Queen and Little Collins Sts., Melbourne

AGENTS;

Engineering Supply Co. of Australia Ltd., P.O. Box 510 Brisbane  
Chas. Atkins & Co. (W.A.) Ltd. - - Hay Street, Perth, W.A.  
Oliver & Oliver - - - - 9 Argyle Street, Hobart, Tasmania  
Chas. Atkins & Co. Ltd. - - Currie Street, Adelaide, S.A.

bilities are offered for the use of tiles, *carrelages* or *moellons* (Fr.); *tejas* or *baldosas* (Sp.). Above all is this first expressed in the *patio*, usually a fountained courtyard which serves in a way as a general living room. All lines which strike the eye are rectangular, horizontal, perpendicular or diagonal, lines to which tiles in geometrical forms alone lend themselves with symmetry, though abjuring the curved line. In combination, as they often are, with marble, stucco or porphyry, these enamelled faïences, which they virtually are, form a unique decorative form of architectural expression. The effect of to-day is best seen in Spain, where the best and most modern tiles are commercially produced.

Following the inspiration of the 10 in. tiles of the Mecca Wall of the Agha Mosque, at Cairo, a conventionalised lotus conception as to design, the Moors of the Western Moghreb, as they overran Spain, brought with them the wall tile idea as expressed by the 14th century Hispano-Mauresque *azulejos* which showed a *finesse* of detailed interlacings of geometrical patterns, and were used largely for band friezes, often carrying fire-painted inscriptions.

At a later time Italian pottery workers were brought to Spain, and, with a brake put upon their natural inventiveness, set to work producing pseudo-Moorish tiles after the same methods as employed by the original workers, preserving the crude Berber *motifs* and inundating the country with their product.

What may be liberally accepted as Hispano-Mauresque tiles may be readily divided into three classes of product, the one and the other, even by

experts, often confused as to origin and genuineness:—

- (a) Those made by the Moors for their own use.
- (b) Those made for their Christian conquerors.
- (c) Those made by Spanish or Italian potters in

Spain after avowed Moorish designs.

Unquestionably the majolica tiles from the Spanish islands of the Baleares, which had already travelled as far afield as Siena in Italy, had a big influence upon the diffusion of the tile in Spain and indeed throughout the Mediterranean at the beginning of the 16th century, but the Moorish tile was something which antedated this by more than two centuries.

It is for this reason that the tile which decorated the Moslem and Arab house, mosque and fountain courtyard gave the predominant Moorish influence to what has become artistically and commercially recognised as the distinctively Spanish tile of to-day, as of yesterday.

It is in Spain that the tile and its use reaches, and has always reached, its supreme height, a legacy of the Moors of Fez and Morocco city, whose descendants to-day still guard the keys of their houses at Cordoba and Grenada expecting some day to reintegrate themselves therein.

Spanish architecture in all its phases is most complicated, less nearly pure than that of most other European countries, whatever be the epoch, but the tile through all ages has never been a modest, half hidden accessory; always it has been in evidence, even in the Gothic era, which the Spaniards wrongfully call Tedesco, for the reason that they believe it is of German origin.

Notably did the tile come to its first shiny brilliance in the Byzantine-Arabic, the Mauritania-Almohade, and the Mudejar or Granadine eras, known precisely to archæologists and historians and a few others, which in turn evolved themselves into the Hispano-Mauresque. Never, even during the period when the Renaissance forced itself upon Spain from France and Italy was the tile entirely absent; indeed it lent itself to a ready interpolation in the *estilo plateresco*, or surface-ornamented vogue, which in Spain also had considerably more than a reminiscent trace of the crude Berber geometrical form.

So true have been Spanish architects in general to the principle of exclusion of all animal forms in design that tiles in the Peninsula, whether they be modern or mediæval, have almost invariably followed the geometrical (and sometimes incised or embossed) forms of the pure Moorish type, seen at its very best in the now no longer closed Morocco of to-day. Here in the courtyard of the Grand Vizier's palace in the old walled Sherifian capital of Fez (now a banally-named tourist hotel) may be seen the very best of the tiles of its indigenous epoch of construction.

Since time immemorial tiles have been used throughout Mediterranean Europe and the Near East countries. They are as old as the hills from which their first makers drew their clay. As pavements and wall decorations they seem to have been the stronghold of an art expression which has endured for centuries, and may be accepted also as a manifestation of ideas of hygiene and cleanliness which are not usually attributed to the populations of those countries.

The invasion of Western Europe by the expansion and vulgarisation of the tile idea was due to the Moorish over-running of Spain and their bringing this,

## **Velure** The Most Elastic Paint Made

TO suit all purposes, including Railway Carriages, Tramway Cars, Offices, Hotels, Hospitals and the Higher Class Dwellings.

Recent works include Buckingham Palace and Windsor Castle, Australia House, London, and Hotels Carlton and Australia and "Wigram House."

VELURE will not crack, chip nor blister, and has a wonderful covering capacity. Specify VELURE for your new architectural works, and have a lasting and high-class finish,

OBTAINABLE FROM  
G. E. CRANE & SONS  
and All Paint Supply Houses



then new, embellishment of constructive elements with them. Obviously in the warm countries the glazed tile (an hygienic improvement over a matt-surfaced plaster revetment) for floors and wainscoting was vastly to be preferred to wood, which might become rotted, worm eaten and insect bored with a destructive rapidity which no known human care could avoid.

Tiles have none of these defects and inconveniences, presenting clean, enamelled surfaces, which are readily kept in the same pristine condition. They may be embedded handily in mortar or cement, and are to all intents and purposes indestructible. The tile at its best is an improvement over the Roman and Greek application of mosaics, in that with no discounting of artistic worth much time, labour and expense may be avoided in producing an effect but little inferior.

Many old Arab and Moorish tiles were decorated, in addition to their fundamental arabesques, with verses from the Koran. A modern tile manufacturer in England has produced a whole series with Rubáiyát quatrains, intended for fireplace decoration. The scope of the idea is susceptible of a very great further extension.

Floor tiles have seldom had inscriptions or anything more than decorative devices worked out on their surfaces; there is something which goes against the better instinct when one is obliged to tread upon a phrase which is supposed to express welcome but which only suggests an insufferable egoism. That is why the door mat is vulgar. And as for walking on a rose-covered carpet of moquette—what sacrilege! The Moslem knows better, has a finer sentiment; though he has 40 wives, his silken prayer rug follows the design of his porcelain tiles—is an arabesque pure and simple.

Obviously, for coolness as well as cleanliness, the tiled floor or wall has ever been recognised as to suitability for use in the Mediterranean countries of Europe and North Africa. In modern times the industry producing tiles in all their various and applied forms has been exclusively in the important ceramic centres,

noted for their potteries and clay products, of Spain, France and Italy, where the output has reached its most distinguished forms, though perhaps of less artistic appeal than the cruder incised (intaglio) forms of the indigenous Moorish makers in the heart of Morocco even to-day. There they have, besides the smooth-faced varieties, the traditional embossed forms, which in spite of their antique origin suggest still more ample possibilities in their future wider application when the wave actually crosses the ocean to America, say, for as yet it is there in its infancy as compared with old Europe.

In Continental Europe to-day most construction schemes find the interpolation of tiles, used both from a utilitarian and a decorative point of view, cheaper and more adequate in results than any but the most ordinary and least durable of woods; when it comes to oak or walnut the difference in cost is the more apparent, above all where the wood is highly worked or carved. As a means to an end the one single carved or embossed pattern tile is reproduced in infinite number and as varied a colouring as may be desired. Incidentally there is nothing to prevent the tile maker or the amateur house designer to employ as great an artist as Della Robbia to design his tiles if he will.

In Spain, France and Italy to-day can be had artistically produced tiles delivered from the manufacturer's stock, their motives and colouring ranging the whole gamut from designs so faint as to give but the vaguest impression of a design, to others so vivid that they almost raise the temperature. Each has its uses, and one or another may be depended to line up with almost any imaginable colour scheme.

Collectors are already beginning to take notice, aside from museums who are keen and ready buyers of "epoch" tiles, and porcelain and faience enthusiasts are gradually enlarging the scope of their ambitions and including what are generally known as tiles, embracing all but mosaics, from the humble *moellon*, or "tomato" as the French call the hexagonal red floor tile, up through the art of the Persians and Moors to those finest of porcelain wall coverings of the *genre*

Telephone City B 3772

### JEFFRIES & DUNNINGHAM

QUANTITY SURVEYORS

Walter Jeffries  
J. C. DunninghamN.Z. Insurance Buildings  
79 Pitt Street,  
Sydney

Tel. B 1906

### CHAS. A. HARDING & SON

QUANTITY SURVEYORS

Fifth Floor,  
Gibbs' Chambers,  
Martin Place

JOHN HARDING

Telephone: B 8565

### LONEON & HOCKING, Ms.Q.S.A.

QUANTITY SURVEYORS

16-20 Bridge St., Sydney.

MR. F. MORTON HOCKING

Estab. 1885

### J. ANDERSON WOOD & SONS

QUANTITY SURVEYORS

Pitts Building  
476 Collins Street  
MELBOURNE  
Phone, Central 5810Union Bank Chambers  
68½ Pitt Street  
SYDNEY  
Phone, B 3932

made known to the Western world by the Buen Retiro.

Of the old tiles made by the Moors during their sojourn in Spain those most sought are those of a metallic lustre, a tile which expresses the art of its maker at its very highest. Of such examples still to be had they show how well they have stood the changes and chances of centuries. Such examples when they fall into the hands of the collector or "amateur" usually run to a value of a few thousand francs at least, but they are the aristocrats of their class.

The finest of genuine Moslem tiles in private hands to-day—the museum specimens, so to say—have come from the ancient mosques of Turkey, Persia, North Africa and Morocco, as these countries have gradually come under European sway, above all that of that Philistine destroyer who usually styles himself merely a collector. Another part that these old tiles have genuinely played is as the inspiration of the modern tile makers with the well-nigh perfection of production to which they have arrived commercially to-day.

#### CONCRETE NOT FIREPROOF!

Brick manufacturers and others will be interested to know that the results of experiments reported to the British Association, by Prof. F. C. Lea and Dr. R. E. Stradling, indicate that concretes containing quartz sand as a fine aggregate lose about 20 per cent. of their strength when heated to 550 deg. Cent., and 70 to 80 per cent. at about 700 deg. Cent. The cause suggested by the experimenters is the expansion of quartz at 575 deg. Cent., when a transformation, with expansion of the silica, takes place. Concrete having a much higher fire resistance can be made by using brick or natural rock (such as basalts and diorites), which do not contain much free quartz, in place of sand, as an aggregate. The loss with such a material is only some 30 or 40 per cent. at 700 deg. Cent., or even at 1,000 deg. Cent.

Yet, even with an aggregate of ground bricks, which will bear the load during the fire, some of the after-effects may cause the failure of the structure. Thus, water has a very serious effect, as, when Portland cement is wetted, one of the chief products is calcium hydroxide (slaked lime), and when this is heated above about 400 deg. Cent. the water dissociates, and quicklime is formed. This action is accompanied by a considerable contraction which produces very fine hair cracks, and when, on the cooling of the mass, the air is able to gain access to these cracks, the moisture in it combines with the quicklime, which then slakes and causes serious cracking and bursting of the concrete.

It has long been known that when reinforced

concrete is heated irregularly, as in a conflagration, the concrete will spall off and expose the steel, and if the building does not then fail, the moisture from the atmosphere, finding access to the quicklime, formed as explained above, causes cracking and disintegration of those parts of the concrete which have been heated. The lesson to be learned from these experiments, as from many other experiences with concrete, is that bricks are still the safest, as well as the cheapest building material for all ordinary requirements.—*"The British Clayworker."*

#### THE GREEK POINT OF VIEW.

The following address was delivered by Mr. R. P. Jones, M.A., before the Oxfordshire Society of Architects recently:

"Greek architecture," said Mr. Jones, "comprised the most perfect that had ever been produced. There were two qualities that had to be considered in studying its development. Firstly, that its ornament was essential to its construction; secondly, sculpture was applied to the architectural forms and was complete and as distinct from them. There was not more than about a dozen Greek temples existing in anything but a fragmentary state. There was one word which fitly described Greek work, and that was 'lucidity.' It was simple and direct, and obviously had a timbered prototype. The form and position of the Triglyphs were sufficient evidence, and indicated that beyond doubt Greek temples always existed in a brilliant atmosphere. The matter of lighting, although a subject for a great deal of conjecture, was one which was probably considered of small importance by Greeks. The lighting of their temples lessened as one approached the inner Sanctuary.

"The method of lighting was from the outside inwards. That was entirely reversed in later ages. The basis of their design was the column with its entablature. Size made no difference, for smaller proportions were used in all buildings whatever their actual dimensions. There was a purpose in the flutes to the columns. The strong sunlight on plain columns gave a very definite line between the light and shady portions of the column, and that might have been thought to have detracted from the æsthetic value. Now the flutes transferred a quantity of light to the shadow and a quantity of shade to the light surfaces. Greek architecture was trabecated. There were no arches giving thrusts, and it was in fact exemplary of the policy of their present government in its 'tranquillity, quietness and sedateness.' That being so, there was no need for cementing material, and the various stones and features were built one upon the other with dry joints. After the burning of Athens by the Persians, it fell to the lot of Pericles to produce the great works which formed so important a standard in the chronology of architecture."

Photographs of the Acropolis, with its Parthenon, Erechtheum, Propylea, Temple at Nikepteros, etc., were shown, from which it was clear that the exterior of a Greek building does not express the arrangement of its interior. Carefully taken photographs showed the slope of the columns, the horizontal curvature, etc., as examples of mathematical refinement.—*The Builder.*

*The Motor  
in Australia*

*Architecture*

THE MOTOR PRESS OF AUSTRALIA,  
LTD.

MAGAZINE PRINTERS  
AND PUBLISHERS.

NORTHCOTE CHAMBERS  
16 PITT ST., SYDNEY

Tel B1219



## ANOTHER BRITISH INDUSTRY EXTENDS TO NEW SOUTH WALES.

Recognising the importance of New South Wales as a consumer of steel in all its various forms, and in pursuance of their policy of direct supply from manufacturer to consumer, the well-known steel manufacturing firm of Dorman, Long & Co., Limited, of Middlesbrough, England, has acquired the Stockyard

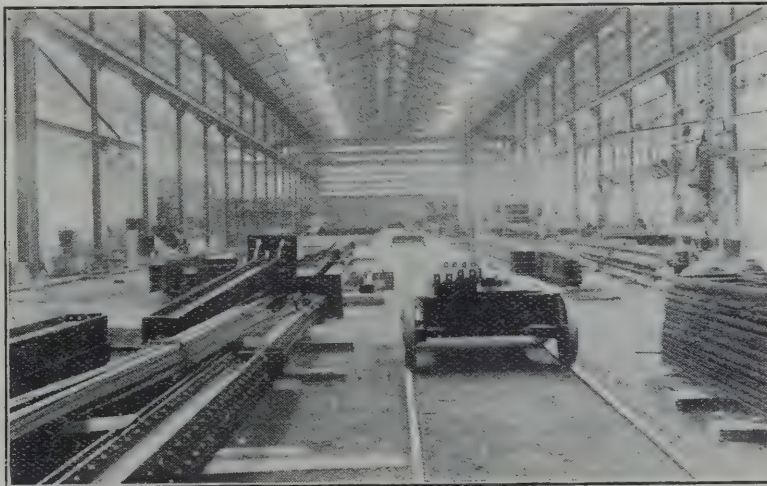
- 1,000 coke ovens producing annually 865,000 tons of coke.
- 1,000 coke ovens producing annually 62,500 tons of tar.
- 1,000 coke ovens producing annually 12,500 tons of sulphate of ammonia.
- 1,000 coke ovens producing annually 2,000,000 gallons of crude bensol.



General View of the Sydney Works.

and Structural Engineering Works at Alexandria of Messrs. Scruttons Limited, their late agents. Founded in 1876 by the partnership of Mr. Dorman and Mr. Long (the former being still the Managing Director),

- 32 blast furnaces producing annually 1,078,000 tons of pig iron.
- 32 steel furnaces producing annually 1,000,000 tons of ingots.



Interior of Main Bay of Sydney Works

the history of the firm has been one of continuous progress, until now, with a capital of £7,500,000, they are the owners of:

- 9 ironstone mines producing annually 1,650,000 tons of ironstone.
- 1 quarry producing annually 300,000 tons of limestone.
- 7 collieries producing annually 1,835,000 tons of coal.

17 rolling mills producing annually 750,000 tons. This steel reaches the world's markets in the form of steel joists and sectional material, steel plates, bars, railway and tramway rails, sleepers and bearing plates, all descriptions of wire and galvanised corrugated sheets. A large tonnage of their various products is held in stock at the Sydney works, which are equipped for the carrying out of all classes of structural engineering, such as steel frame buildings, stanchions, compound girders, roof trusses and bridge work.

## IDEAL CITIES.

A lecture on this subject was delivered recently by Mr. Wm. Haywood, at Birmingham University.

"Ideas of that class," he said, "were not new. Even omitting those of the ancient world, there were More and Campanella in the sixteenth century; Andreae and Swift, in the seventeenth and eighteenth centuries; and Bellamy, Butler and Morris, in the nineteenth century—all writing of Utopias. Robert Owen, in 1818, bought 1,200 acres of land and actually began an ideal village, but accomplished little of importance; and in 1848, James S. Buckingham published a remarkable scheme for a small model city, which was curiously like that for an imaginary 'Christianopolis' published in 1619 by Andraeae, except for certain natural differences due to two centuries of change.

"Sir Titus Salt carried to completion a notable experiment when he built Saltaire, in 1853; but it was with the work of practical idealists like the late George Cadbury and Lord Leverhulme (whose ideas materialised in 1887-8) that the first practical results of earlier speculations and trials were carried to a really convincing conclusion. That was especially true of Bourneville, which avoided the somewhat institutional character of Port Sunlight, and displayed the

free and untrammelled conditions under which it was conceived—conditions happily embodied in the design of the buildings and in the method of their arrangement.

"Those and similar 'garden suburbs' were often described as 'garden cities,' or as of a 'garden city' character, but it was important to remember that such suburbs were essentially unlike the fully-detached and self-sustaining town of Letchworth, or that of Welwyn, now building, to which communities alone the term 'garden city' was properly applied. The Letchworth type of town differed from all others by its adoption of Mr. Ebenezer Howard's teaching: (1) That all communities should own the land upon which they stood in order to avoid the exploitation of land values; (2) that the size of a city should be strictly limited to something under 50,000 (Letchworth was to be 30,000); and (3) that it should be surrounded in perpetuity by a belt of agricultural land for health purposes and for the mutual convenience of the grower and buyer of market produce. Letchworth, which was commenced in 1903, made no special contribution to town planning knowledge, but in policy and administration it was unique as the first experiment in a new form of town control."—*The Builder*.

## High-Grade Cement—Prompt Deliveries

ALTHOUGH the demand for KANDOS HIGH-GRADE CEMENT is extremely heavy, we can meet all Orders immediately.

Our present output of 2,000 Tons weekly will be increased to 3,000 tons within the next three months, when Extensions to our Plant, now being erected, will be completed. In addition to other Extensions, we are now installing the Largest Stone Crusher in Australasia.

Box 2613 G.P.O., Sydney.  
Telephones: B 6741, B 6742.

Works: KANDOS.

Telegraphic and Cable Address:  
"KANDOE," SYDNEY.

Codes:  
A.B.C. 5th Edition. Western Union



Registered Office: PERPETUAL TRUSTEE CHAMBERS, 39 Hunter Street, Sydney



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### MODERN METHODS IN BUILDING.

#### Fine Exhibit at Royal Easter Show.

The exhibit at the Royal Easter Show of a modern Bungalow residence built completely with "Fibrolite" Asbestos Cement Sheets and roofed with "Fibrolite" Slates demonstrates the progress that is being made in reducing the cost of building without in any way decreasing the strength and durability of the structure. It explodes the old idea that massive construction is essential to durability. In this "Fibrolite" Bungalow improvements in sanitation and hygiene have not been lost sight of, whilst maximum comfort for occupiers has reached a degree of perfection.

The "Fibrolite" Bungalow, it is claimed, is the most inexpensive type of home that can be built, costing, as it does, no more than a house of weatherboards and lining boards of similar size and construction. The "Fibrolite" Bungalow conforms with every essential of the permanent home. It is artistic in appearance, economical to build, and is fire retardant, white ant proof, borer proof, rot proof and practically everlasting. Exposure to weather only tends to harden and strengthen the "Fibrolite" materials with which it is built.

The rough-cast treatment on the exterior walls of the "Fibrolite" Bungalow at the Royal Easter Show is most interesting, providing something absolutely new in modern building construction. "Fibrolite" Asbestos Cement Sheets form a wall base for the rough-cast mixture. The large, firm sheets are nailed direct to the studs with the reverse side exposed, providing a perfect key for the rough-cast to adhere to. The sheets are butted together and the joints covered with a strip of half-inch mesh wire netting. After the wall surface

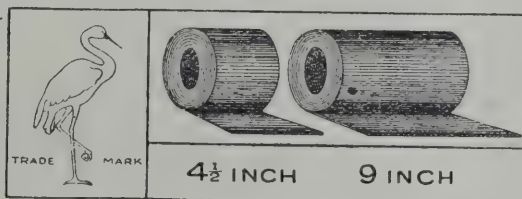
is given a coat of neat cement, the rough-cast mixture is applied to the walls in the ordinary way. The dominant feature of treating "Fibrolite" Asbestos Cement Sheets in this manner is that absolutely no additional cost is incurred, and a highly artistic, durable and serviceable wall is secured. The exhibit should prove of considerable interest to architects, builders and public alike.

The interior of the bungalow gives a splendid idea of the many beautiful effects to be secured with "Fibrolite." The walls and ceilings of each room in the bungalow are built entirely with "Fibrolite" Asbestos Cement Sheets, but the judicious use of different shades of "Fibro-C" cold water paint has given quite a different appearance to each room. The bedroom is particularly attractive and restful with its walls of soft French grey and pure white ceilings. The living-room is painted in a delicate pink, the breakfast-room in buff and the kitchen has white walls and ceilings.

The bungalow is roofed with "Fibrolite" Asbestos Cement Slates. The gables are covered with "Fibrolite" Shingles and "Fibrolite" Sheets have been used for lining under the eaves.

The walls and ceilings of an attractive little building at the rear of the bungalow are lined with Fibrous Plaster Sheets, manufactured by the same exhibitors. The panel treatment of the walls has been carried out with plain Fibrous Plaster Sheets, with a dado of 3-ply veneer in various woods. The ceiling of Fibrous Plaster Sheets, in various patterns, provides a very artistic and attractive appearance.

The exhibit, which is one of the finest and most interesting at the Royal Easter Show, is from the establishment of James Hardie & Coy., Ltd., York and Wynyard Streets, Sydney.



### IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

### A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight. Superior, and costs less than cutting from Sheet Lead. No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**  
33 and 35 PITT STREET, SYDNEY.

## THE PRINCIPLES OF ARCHITECTURAL PLANNING.

In the course of a paper on "Some Principles of Architectural Planning," delivered at University College, University of London, Mr. Arthur J. Davis, F.R.I.B.A., said the art of planning was as old as the history of the human race. Its application was universal, as it touched on one side the science of geography, and on the other a knowledge of its laws was necessary to the designer of the humblest wayside cottage. Good planning was synonymous with sound logic and common sense, and he would remind them that the latter quality was far from being as widespread as one would imagine. His purpose that evening would be mainly to discuss some of the universal laws which at all times had governed the process of architectural composition.

To this country, planning as an art had been very little appreciated, either by the enlightened public or even by architects themselves, and for ten intelligent persons who understand good detail and fine proportion in an elevation there was hardly one who would realise the value of a well-conceived plan. They could not be surprised at that when they saw that their Royal Academy banished from the walls of its yearly exhibition all plans, and confined itself to the hanging of pretty pictures.

After approaching his subject from an historical point of view, Mr. Davis said it was chiefly in the vigorous time of the Renaissance, when every intelligent person was keenly interested in the progress of art and science, that town planning and the lay-out of open spaces and public thoroughfares took on the character which they all associated with it to-day. Fine

town-plans of that period were numerous. The city of Nancy was an excellent example, as were the great town-plans of modern Paris and the ring at Vienna. The skilful lay-out of Buxton, Bath, Cheltenham, Clifton and Plymouth were also worthy of study. In the United States, where one would naturally look for the best and latest examples, it was disappointing to note that, in spite of all the advantages their founders had over those of the early European towns, great opportunities had been missed. In New York the famous gridiron plan, a conception without imagination or real practical value, showed how a short-sighted and mercenary policy could mar what might otherwise be a beautiful city. On the other hand, it was refreshing to see that in Washington and the new parts of Chicago the gridiron idea had given way to a less stereotyped arrangement. In planning it was variety and the unexpected which appealed, but those qualities must be bound together by an orderly arrangement on sound logical principles.

The requirements of large cities varied from year to year. The enormous and ever-increasing size of their modern towns, the daily ebb and flow of the countless multitudes which inhabited them, the introduction of mechanical transport, and the consequent difficulty in regulating the traffic in the busy hours of the day, has given rise to problems which were almost impossible of solution. Unfortunately, they seemed to be unable to profit by the experience of their past failures, and it was deplorable to have to record that cities which had expanded to twice their original size in a relatively short period were often controlled by municipalities whose breadth of vision was limited to their tenure of office. In London it was regrettable

Telephone B2407

### LOUGH & SHAW QUANTITY SURVEYORS

JOHN J. LOUGH  
H. E. SHAW

Atlas Buildings  
8 Spring Street

Phone B 3779

Phone Private. Hunter 405

### C. PEARSON SHAW QUANTITY SURVEYOR

BOND STREET, CHAMBERS,  
2 BOND STREET, SYDNEY

Late Valuer City Properties for Federal Taxation Department.

Telephone City B 3772

### JEFFRIES & DUNNINGHAM QUANTITY SURVEYORS

Walter Jeffries  
J. C. Dunningham

N.Z. Insurance Buildings  
79 Pitt Street,  
Sydney

Tel. B 1906

### CHAS. A. HARDING & SON QUANTITY SURVEYORS

Fifth Floor,  
Gibbs' Chambers,  
Martin Place

JOHN HARDING

Telephone: B 8565

### LONEON & HOCKING, Ms.Q.S.A. QUANTITY SURVEYORS

16-20 Bridge St., Sydney.

MR. F. MORTON HOCKING

Estab. 1885

### J. ANDERSON WOOD & SONS QUANTITY SURVEYORS

Pitts Building  
476 Collins Street  
MELBOURNE  
Phone, Central 5810

Union Bank Chambers  
68½ Pitt Street  
SYDNEY  
Phone, B 3932



# *The* **Ornamental Steel Manufacturing Company Limited**



We are Craftsmen in the Manufacture of  
**ORNAMENTAL STEEL GATES**  
**ENTRANCE DOORS AND RAILINGS**  
**COLLAPSIBLE GATES**  
Lift Enclosures :: Lift Cages  
Grills and Tenants' Boards

Also Specialists in the Construction of  
**Steel Ferneries**      **Cantilever Awnings**  
**Conservatories.**   **Fireproof Motor Garages**  
and All Descriptions of Ornamental Steel Work, for which we  
are prepared to submit Designs and Estimates Free of Cost

*Registered Office—Corner of*  
**Redfern and Castlereagh Streets, Redfern**  
*Telephone Redfern 77*

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

to see so many missed opportunities to overcome the awkward conditions with which they now found it so difficult to cope. Did they not hear with unavailing regret that the short-sighted policy (the result of the vested interests of the day) caused the abandonment of Sir Christopher Wren's nobly-conceived plan for re-constructing the City after the Great Fire. With that glaring example of lack of foresight, from which they were still suffering to-day, it might have been hoped that they had learned their lesson and would not again repeat the errors of the past, and yet the confusion continued. They might liken our modern city fathers to the Bourbons, who had forgotten nothing and learned nothing. It was not his duty to censure or

criticise their town authorities, but to give one example of the lack of vision. Did they not see that when their latest building, the London County Hall, was completed, the great opportunity of constructing on the south side of the Thames an embankment similar to that opposite had been missed and only a narrow foot-way for pedestrians provided.

It was extraordinary how easy it was to go astray in dealing with even the simplest schemes if they were not considered from a broad and logical point of view. The average Englishman in all matters which did not affect him individually was generally satisfied with half-measures. Unfortunately, the policy of compromise, so dear to his heart, was more often successful in politics than when applied to the solution of architectural problems. That lack of personal interest was responsible in no small measure for the confusion and lack of public spirit which had been manifested in so many attempts at improvements carried out with regard to future expansion and development. He referred to the recent illustrations in the Press showing the proposed reconstruction of the Bank of England, and some of the neighbouring properties, and said that in view of the alarming congestion which occurred daily in one of the most crowded centres in the world, it would seem obvious that the foremost consideration would be to take advantage of those re-planning schemes in order to widen the thoroughfares which converged to that spot. Yet they saw that the controversy only touched on the best way of erecting a new bank with the retention of Sir John Sloane's original elevations. The totally revised planning of the whole neighbourhood had never apparently even been contemplated. The Bank of England, being a low building, as were many of its neighbours, it followed that if those were replaced by higher structures housing a far greater population than at present, the already too congested streets would soon become absolutely impassable. Surely the first duty of the controlling authorities should be to say to the owners of those properties: "You shall not be allowed to increase the height of any of your buildings unless you give up to the public a proportionate area on plan." Sentimental regard for an existing structure, even of considerable artistic merit, should not be allowed to override the far more important demands for public necessity.

## STERLING EGG SHELL FLAT VARNISH

FOR FIRST-CLASS FINISH

## ART-A-FEC FLOOR VARNISH FOR HARD, GOOD WEARING FINISH

**Sterling Varnish Co.**  
ALEXANDRIA



Considering the question of planning as applied to the public buildings on one hand, and to domestic architecture on the other, Mr. Davis expressed the opinion that all the public buildings of a city should be erected in prominent positions and should be so designed as clearly to denote their purpose to the passers-by, whereas a private dwelling should be more remote in its situation, and make no attempt to attract undue attention. He thought the "screened in" theory was a sound one and could be applied to the most domestic building. He considered that the first duty of a private house was to be private. In latter years that idea in many cases had been abandoned, and they saw, with regret, both in this country and in America, wealthy plutocrats erecting houses, the windows of which could be overlooked from the surrounding streets, the ostentatious owner disdaining modesty and privacy, his aim apparently being to impress the public with the splendour of his mode of living.

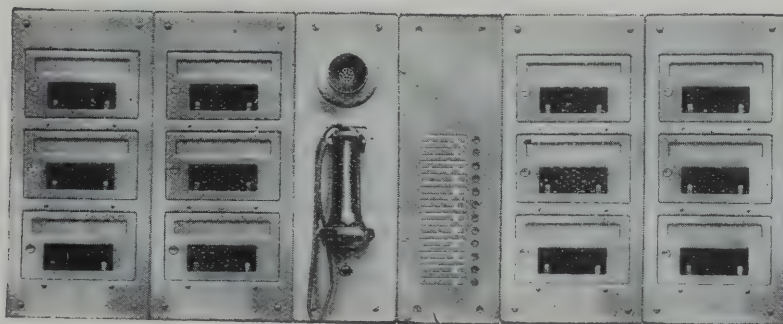
With regard to the internal arrangement of the well-conceived private house, as the owner would in time become acquainted with every nook and cranny, his architect need not necessarily introduce formal methods of planning which might be considered undesirable from the habitation point of view. The comfort of the family, the guests and servants should be the foremost consideration. Windows, doors and fireplaces, instead of being placed in a formal relation, could be considered from the point of view of comfort, avoidance of draughts, privacy and seclusion, and compensation for the loss of architectural grandeur might be

looked for in enhanced domestic convenience. It might not be out of place to consider the question of symmetry in planning, as it was frequently asked: "Why are buildings so often laid out in formal and axial composition regardless of their practical requirements." There was no doubt that having taken into consideration the situation, levels and approaches, whenever a symmetrical treatment was possible a more regular and dignified result was obtained. It might be safely said that symmetry had generally been sought for in all fine periods of art, and their mistaken admiration for haphazard compositions was largely due to the idea that those were designed originally with the intention of picturesque grouping. He would warn them to be careful of striving for the picturesque in architecture. It was a delightful quality, but if analysed in most cases it would be found that the result was not premeditated, but was attained by a series of circumstances foreign to the mind of the original designer. Symmetry in planning could only be advisable when the site and requirements were such that that quality could be introduced without undue effort. Hence he ventured to suggest that wherever possible a symmetrical quality was desirable in planning, and he believed that the striving after theatrical and picturesque effects as such were against the instinctive trend of the creative mind.

The criterion of a good plan was the ease with which it could be deciphered, without the necessity of its various parts being labelled or marked by titles or

# STROMBERG-CARLSON

## Telephones and Letter Boxes for Vestibule in Flats



Write or 'Phone for Bulletin No. 2, which describes operation and illustrates various 'phones for use in each flat. :: We will design a system to serve you best.

**Sole Australian Representatives:—**

**L. P. R. BEAN & CO. LIMITED, 229 Castlereagh St., Sydney**

**Distributors:** BRISBANE—S. H. SMITH, 299 Adelaide St.  
ADELAIDE—CHARLES ATKINS & CO.  
LTD., Currie Street.

PERTH—T. MUIR & CO., 99 William Street,  
BROKEN HILL—WHITE & HOSIER.

sub-titles. It should clearly show the type of construction the author had chosen to adopt. New portions should be distinguishable from the old and each individual floor should bear its special characteristic. He would warn them against considering a plan as complete in itself. The good architect would always think in three dimensions. When working out his plans he would consider the elevations and sections which completed them, and at the same time study the constructional engineering questions, which were inseparable from their conception. In other words, he would endeavour to design "in space," and he (the speaker) assured them that the power of composing in that manner was much more difficult than it would at first appear. Simplicity and directness were essentials of good planning. Another matter of great importance often overlooked by architects was the question of climax and anti-climax. Architecture to be effective should be treated broadly and simply. The onlooker, whether in a city, a garden or a building, should never be allowed to feel confused or bored.

In conclusion, Mr. Davis said that when they realised the lasting quality of their productions, and that in their work success or failure took on a more indestructible form than in almost any other sphere of human effort, they should endeavour in every way to make themselves worthy of the great educational responsibility with which they as architects were entrusted, so as to guide and inspire their contemporaries in an intelligent appreciation of the greatest of all the arts.

—The Builder.

#### TALKING MOVIES MADE REAL.

All the essentials of a real "Talking Movie" were displayed to an audience of 2,500 people by Edward B. Craft, Chief Engineer of the Western Electric Company, at a recent lecture. On the screen, the operation of the radio vacuum tube was shown, while an explanatory lecture was delivered through a group of sound-projectors. So clear was the speech that the audience thought it was being delivered into the transmitter by the speaker in person, and many people refused to believe anything else until taken behind the scenes and shown the reproducing mechanism.

Asked how it was done, Mr. Craft said that one of his engineers had prepared the lecture to go with the film and then delivered it into a Western Electric high-quality transmitter, while he watched the film being shown. An ingenious synchronising device kept the

projector and the sound recorder in step. During the demonstration, several days later, the same device was used to synchronise the projector and the sound-reproducer, so that the speaker's words were heard at the proper stage of the film.

"There are five elements to be considered in the production of a talking movie," said Mr. Craft, "four physical and one psychological. It has been definitely established that the direct recording of sound by simple acoustic means is neither sensitive nor powerful enough. At present all phonograph records are made by sending the sound waves into a horn which converges them on to a small diaphragm. This in turn moves a needle through the soft wax on a revolving disc or cylinder. Considering that all the power to move the needle comes from a speaker's voice, and that at best the total power from his lips is exceedingly small, it is amazing that phonograph records get as much of the details of the voice as they do. Our researches into the nature of speech show that a true reproduction of the human voice—not merely an intelligible talk, but one that we can listen to with pleasure—requires the handling of tones of a very wide range, some of which are extremely weak. Many of these in the higher pitches the phonograph does not reproduce at all. As a concrete example, consider how poorly the sounds 's' and 'f' are reproduced on the average. In our talking movies, however, these sounds come out perfectly clear and distinct. Our recording equipment includes a high-quality transmitter, such as identifies a Western Electric broadcasting set to radio listeners, coupled with vacuum tube amplifiers.

"The high-quality transmitter is so sensitive that it will pick up actors' voices at any point on a movie stage, and the amplifier supplies ample power to reproduce the sound as mechanical vibrations or in any other form we wish for recording purposes. All frequencies are preserved in the relative proportions of the original sound.

"For reproducing the record, several methods are available, according to the type of record used, but all ultimately produce an electric current in a wire circuit. This current is then passed through vacuum tube amplifiers, and turned into sound waves by our loud-speaking projectors. The whole apparatus is a Western Electric achievement, and is one of the many by-products of the researches which are constantly being made in our Bell Telephone laboratories.

## GOODLET & SMITH LTD.

TIMBER MERCHANTS

MANUFACTURERS



Joinery, Mouldings, Skirtings, etc. Stocks of all Timbers.

Terra Cotta Roofing Tiles

HEAD OFFICE  
SAW MILLS AND WHARF:

2 HARRIS STREET, SYDNEY

Telephones: City 9138, 9139, M 2562, M 2563



"The two problems—recording and reproducing the speech—are still under development, and it would not be wise at this time to go into any details. I may say, however, that the method recently demonstrated gives such satisfactory quality that it can be considered one solution of the problem, although probably not the final one. Synchronising the picture with the sound is a problem of electrical and mechanical design, which requires careful thought, but which has a satisfactory solution.

"Finally, we come to the problem of projecting the sound to the audience. By the use of our public address system—a combination of vacuum tube amplifiers and loud-speaking sound-projectors, the sound can come from any point we wish—behind the screen, in front of it, or from one side in the case of an actor who is just about to enter the picture. We might even have projectors at opposite sides of the stage to use in dialogues."

#### "HOMES AND COURTIERS OF QUEEN ELIZABETH."

Mr. J. A. Gotch (of Kettering) recently gave a lecture to members of the Bristol Society of Architects at the Royal West of England Academy, the subject being "the Homes and Courtiers of Queen Elizabeth."

Mr. Gotch said that as the prospects of a peaceful life became more certain to the people of England prior to Queen Elizabeth's reign, the desire for comfort, rather than security, was manifested. The ponderous contrivances for ensuring safety which had hitherto

been necessary, were found inconvenient to the increasing refinements of the age. For fully 60 years a great building period lasted, and there was hardly a village that could not show some work dating between the years of 1560 and 1620, a period which practically covered the reigns of Elizabeth and James. The work had a flavour peculiar to itself, and different from that of any other time or country. Before, it was the Tudor style, still distinctly Gothic, and afterwards came the universal Classic, which gave us buildings closely resembling those which were being erected in all other parts of Europe at the same time. Whatever the shortcomings of Elizabethan work, and however foreign its adjuncts, it was English in its essence, and was always interesting. The peculiarity of this particular style lay in the manner in which English workmen used Italian features on English soil and carried into the Classic forms brought from abroad some of the Gothic ideas they had acquired at home. The bay windows, the steep gables, the lofty chimneys they retained, and developed the mullioned window until it became an essential characteristic of their work. All the Italian dress was put on a body that was entirely English—namely, the plan of the house. The result was interesting, for, on the one hand, old customs and established wants were satisfied, whilst, on the other, new forms and new methods of expression, quite different from anything that tradition could supply, were provided. Those were the somewhat incongruous elements out of which the bright and eager spirits of the time fashioned the piquant architecture of Eliza-

## SNOWDROP

The Perfect Ready Mixed

## WHITE PAINT

Being a pure mixture of the finest zinc and oil, SNOWDROP is the ideal medium for use anywhere by the sea, as it is absolutely impervious to the action of salt water or sea air. It retains its peerless whiteness under all conditions—a true and lasting rampart against decay or deterioration.

Ensure lasting satisfaction by using only SNOWDROP—the Australian White Paint of supreme quality.

*"Better Results with Mascot Zinc Products."*

Manufactured by

**MASCOT SMELTING WORKS**

OLD BOTANY ROAD, MASCOT

Telephone: Mascot 117 & 340,

Cable Address: "Gearinsons, Sydney"

Queensland Agents: A. W. BUTTON,  
Gough's Chambers, Albert St., Brisbane

Victorian Agents: A. KNOX & CO.,  
312 Flinders St., Melbourne

beth's day. There was no longer need for special precautions against attack, but there was a great desire for magnificence, privacy and more light, all requirements of which were fulfilled. One other quality, which was often characteristic of the homes of that period, was their pedantic quaintness. The arbitrary fancy of the architect played a great part in the designs of the day, but the master workmen themselves seemed to have done most of the designing of the various features. They built for the descendants of the builder, and a characteristic feature of all those great houses was the frequency with which the family crest, coat of arms and the initials of the founder were fashioned in all parts of the building.

—The Builder.

#### EXHIBIT OF MONTGOMERIE NEILSON & CO.

##### **Oxidising Non-Septic Sewage Disposal.**

This exhibit was of the well-known Montgomerie Neilson Sewage Tank and was very largely patronised by the sightseers and exhibitors at the Show.

Although the tank is only of a size to deal with 8 persons, on Friday, Saturday and Monday over 7,000 persons discharged their waste into this small tank. On the other days there was also a very large use made of the tank, which, throughout the Show, worked absolutely without smell. The clear water residue of the sewage being freely distributed through sprays on the lawn at the entrance of this stand. Within 10ft. of the Neilson Tank was a large marquee refreshment room with sides open, fully patronised by the public; alongside of this were two other refreshment rooms, and on no occasion was there any remark made as to

the proximity of the sewage disposal plant, which was entirely open to the view of the public.

The striking evidence of the action being non-septic was that no septic odours were given off, and this was clearly proved by the entire absence of flies in the vicinity of the tank.

Mr. Neilson was kept busy showing through the microscope the infusoria, aerobic microbes, which could be clearly seen devouring the organic matter as fish eat food. The truth of this fact has so far been denied by those who have not actually seen it. It has been proved by Doctor Griffith, member of the Royal College of Physicians, London; Arthur Henfrey, F.R.S., F.L.S.; Professor Martin Duncan, M.B. London, F.R.S., F.G.S., etc.; M. J. Burkley, M.A., F.L.S.; T. Rupert Jones, F.R.S., F.G.S., and other well-known scientists. There was one continual stream of persons viewing the microbes at work destroying this vast quantity of waste matter with amazing rapidity.

#### ORNAMENTAL STEEL.

The Ornamental Steel Manufacturing Co., Ltd., recently issued their first catalogue. It contains many examples of the excellent work executed, and in many cases, designed by them. This firm was formed in 1913 with the object of advancing the standard of ornamental steelwork. Their claim of having achieved their object is borne out by the excellent workmanship shown in the illustrations in the catalogue.

The firm recently introduced metal lockers of all steel construction into this country. These lockers are manufactured from mild steel angle-framing with solid mild sheet steel backs, tops and sides. The doors are manufactured of punched steel sheet with a three-way lock and a master-key if required.

These lockers have many advantages, amongst which are safety, fire prevention, economy of space and durability.

The catalogue should be in the possession of all members of the architectural profession.

#### THE POINT OF VIEW IN THE STUDY OF ARCHITECTURE.

An interesting lecture on the above subject was delivered recently by Mr. Edward Warren before the Oxfordshire Society of Artists. He asked of the world in general, what mental image did the name of Oxford evoke? To those who intimately knew and loved the city, and the terms in this case were almost synonymous, especially to those who had passed some of the most impressionable years of their youth within her walls, the image was an architectural image. The instinct to which the beauty and dignity of those buildings were due was a sure instinct, that of expressing the nobility of "true religion" by noble architecture, and the dignity of "sound learning" by the dignified housing of scholarship. Oxford being what Oxford was, could they doubt for a moment that she had unconscious influence on all receptive minds, which rendered her pre-eminently fit for all the conscious and carefully ordained training of students of the great art of which she was so conspicuous an example. She numbered amongst her sons the greatest amongst British architects, Christopher Wren, as well as such names as John Ruskin and William Morris. He was,

**Velure** *is here to meet all the requirements of the man of good taste, and by using Velure he knows his work always comes again.*

**T**HERE are many uses for it, and for High-class Hotels, Offices, Flats and even Tram and Motor Cars, it is the most economical vehicle yet put before users of high-class materials.

Specify VELURE at a lower price, which means a lower cost in the long run.

OBTAINABLE FROM ALL HIGH-CLASS  
PAINT STORES

**D. O. RAMSAY & CO.**

4 BRIDGE ST., SYDNEY

Sole Agents for Australasia. Phone City 2523



# The Motor Press

(AUSTRALIA)

Comprising the following unique publications:—

## *The Motor in Australia*

A Monthly Magazine and Trade Paper of equal interest to the motor trader and motor car user. Profusely illustrated, and containing all the most up-to-date information with regard to Motordom. The man who can keep pace with the progress of the industry without reading the publications devoted to it, does not live.

## *The Australian Manufacturers' Journal*

An interesting and instructive monthly, devoted to the advancement of the Secondary Industries of the State. A Journal which should be read by all true Australians. It is the Official Organ of the New South Wales Chamber of Manufactures.

## *Architecture*

This Monthly Journal is the official organ of the Institute of Architects, and is devoted to Architecture and the allied arts.

## *The Auto Cyclist*

A bright little Monthly for the debonair youths who enjoy life on the open road and a trusty motor bike.

## *The Automobile Register*

A Complete record in numerical order, of all cars and owners registered in New South Wales each week, with changes, transfers and cancellations.

## *Diary and Year Book*

An Annual Motor Reference Book containing the Motor Laws of the Commonwealth, voluminous Legal Notes. World's Records, with a three days to a page quarto standard diary.

---

MOTOR PRESS OF AUSTRALIA LTD.

PRINTERS AND PUBLISHERS

16 PITT STREET, SYDNEY.

TEL. B 1219

perhaps, trying to convince the already convinced as to the pre-eminent fitness of Oxford for a school of architecture. Their lectures, then, were, they hoped, forerunners of such a school, and they had the immediate hope that they might be accompanied by classes in architecture, construction and design, primarily intended for young men studying architecture with a view to its practice, whether members of the University, or pupils, or assistants in the offices of Oxford architects, but open to all serious students who would follow a definite course of training.

The lecturer then dealt with the style, or manner, of buildings in different countries, and went on to say that style, or manner, of building had arisen, naturally, from building necessities and materials, and this he held to be strictly true of all real styles or constructive manners, but it did not, of course, cover adopted or half adopted fashions in architecture, or attempted revivals of ancient manners. In England, and markedly Oxford, the native, local style of building lingered long after the half-hearted adoption of a foreign manner, known as that of the Renaissance, and derived from the French, the Flemings, and the Germans, who were copying the Italians, who were copying, more or less, the remains of Roman buildings and Greek statuary, which they were re-discovering. The acceptance in this country was for a long time slow and half-hearted, and, throughout England, and more particularly in the West, there were many curious and interesting in-

stances of survivals of, and reversion to, the native manner of Gothic architecture; but none, so far as he was aware, more marked than in Oxford, which had been called the "home of lost causes," and had certainly been so in regard to native Gothic architecture when that was already a lost cause elsewhere.

To the student of architecture, continued the lecturer, and especially to those who were studying it with a view to its practice, that deepening of consciousness as to all forms of buildings and their accessories, was inevitable and necessary. They must have a point of view and a critical one; they must acquire a fair knowledge of the constructive history of their craft, as well as of the recognised and accepted rules of modern construction. Some knowledge also, not necessarily deep but accurate as far as it went, of social history and its manifestation in architecture was absolutely necessary. Domestic architecture was the most vivid illustration of social history. Architecture, as an illustration of history, and history as an explanation of architecture, were such fascinating studies in themselves that the true student of either would inevitably be drawn to the other. But no mere historical or archæological reading would lead them far in the understanding of architecture without the earnest study of its basic principles, its constructive needs, and their expression in proportion, balance and harmony, its protective necessities and their acceptance and treatment as contributive accessories of design.

—The Builder



"Astor Flats," Macquarie Street, Sydney.

Reinforced Concrete.  
Kandos Cement used throughout.

## Established for All Time

THE most stately structures that are the crowning achievements of Sydney's Architects and Master Builders to-day are in Reinforced Concrete,

Founded and established to endure through the centuries, their grace of design and construction will stand as a permanent testimony to the art of the designer and the craft of the builder.

The permanent solidity of the notable building here illustrated depends in no small measure upon the unfailing reliability of KANDOS PORTLAND CEMENT.

### Kandos Cement Co. Ltd.

33-39 HUNTER STREET, SYDNEY  
WORKS: KANDOS

Telephones B6741, B6742, Box 2613 G.P.O.  
Cables and Telegrams—"KANDOE," Sydney.



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### SAVE YOUR RECORDS.

If there is one thing that causes business men more thought than any other, it is the risk of fire. Fire-resisting buildings are being constructed, but these simply act as a deterrent. It becomes necessary for every house to have a safe repository for its documents and securities that is both fire and burglar proof.

The invariable custom is to build strongrooms, or use safes for this purpose. One of the oldest manufacturers of fire-proof safes and doors are Messrs. Wearne and Breakspear, of 296 Sussex Street, Sydney, who have been manufacturing these products for over 40 years. This firm has credentials dating as far back as 1871 and up to the present day, showing the fire-resisting qualities of their safes and doors.

On June 17, 1871, the fire-resisting qualities of these safes were publicly demonstrated in Belmore Park, when, with an imported safe, they were subjected to an extraordinary test by fire and water. The reports on this matter show that the contents of the Wearne safe were uninjured, and that the safe was opened with the key, but the other safe, the contents of which were damaged, had to be cut open.

In the following year, another demonstration was carried out in Belmore Park. Fifteen tons of billet-wood, saturated with coal tar, were piled on top of one of the safes, and the fire raged for two hours. The safe was immediately cooled by two streams of water from a fire-engine, and when sufficiently cool the safe was opened, and the contents found to be free from any trace of fire.

The records of the firm show that these qualities have been maintained throughout, and for this reason their products have given satisfaction to thousands of customers.

### ELECTRIC LIFTS AND HOISTS.

Some two years ago, Monarch Electric Motors, Ltd., started out on its commercial career, manufacturing electric motors for all classes of work. In this short space of time they have succeeded in firmly establishing their product on the market. The reason for this is the sound design and rugged construction of their motors, which have demonstrated their ability to stand up to all claims made on them. Having succeeded in

this direction, the firm has turned its energies in other directions wherein electrical appliances are required, and one of them is of interest to architects and builders.

The avenue that we refer to is that of making electric lifts and hoists. Already the quality of their products have been recognised, and a number of lifts installed, including two at the new Government Stores Supply Building, Essex Street, Sydney. The reason for this recognition is due to a strict specialisation in the various branches of the work, and the employment of only the best skilled labour. The maintenance department is efficiently organised, its workmen being instructed that it is not sufficient to simply look at the machine, they must carefully examine every part, and anticipate and guard against any trouble likely to cause a stoppage.

The result of this care is reflected in the satisfied users of their lifts and hoists.

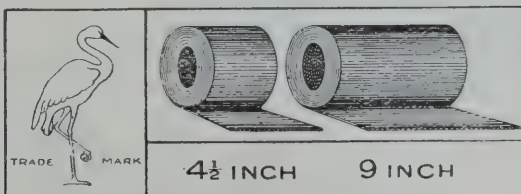
### THE STORY OF SOLAR DAY LITE.

The Solar Illuminating Co., manufacturers of Solar Day Lite Units, developed the present unit in 1921, after many years of hard and earnest effort. It was the aim of this organisation to put forth a unit that, besides being sanitary and dust-proof, would render efficient light and diffusion at low cost. In addition to embodying these features, Solar Day Lite Units reflect no shadows, give an even glow of light without glare, and are dependable for colour and shade selection.

The Solar Illuminating Co. created a sensation in 1921, when they exhibited Solar Units at the show of the National Council Lighting Fixture Manufacturers. No greater compliment was ever paid any commercial unit than the clever imitations of Solars brought forward the following year at the same show, by over a dozen competitors.

These units are endorsed by prominent lighting engineers, architects, and merchants from coast to coast of America. There is a Solar Day Lite Unit made for every business need.

Home Electric, of King Street, Sydney, who are specialists in home lighting, are handling all of these lines.



## IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

## A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight.  
Superior, and costs less than cutting from Sheet Lead.  
No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.

## THE MANUFACTURE OF LINSEED OIL

By F. COOKE, (Meggitt, Ltd., Sydney.)

The subject of linseed oil, which I am presenting to you, covers a tremendous scope, and is too great to be discussed in full in this paper; but I will endeavour to outline the more practical branches of the industry, without entering upon the numerous intricacies of the process of manufacture.

The quality of raw linseed oil is dependent upon two main factors—the first controlled by nature, and the second by the human element. The characters and quality of the seed, and of the oil it yields, are the result of natural variations, while the method of crushing and handling is under human control. Flaxseed will vary in oil content, and in the quality of the oil and cake produced from it. The most important factor controlling these variations is the geographical location within which the seed is grown.

There are three great centres from which comes nearly all the seed used in the manufacture of linseed oil: Russia, India and Argentine, and, to a lesser extent, North America, China, Western Europe and Australasia contribute towards the world's supply. Unfortunately, up to the present time, Australia has hardly begun to realise the importance of linseed growing. In order to induce the man on the land to cultivate flaxseed, the pioneers of the linseed oil industry in this country—Meggitt, Ltd.—have recently supplied to various farmers in New South Wales sufficient seed to sow upwards of 1,000 acres, and at the same time guaranteeing the growers a price for their crops, based

on world's parity, with a minimum of £16 per ton. Results of this experiment are now being anxiously awaited.

Each of the countries above mentioned produces seed which yields oil of different characteristics, the differences mostly being due to the chemical composition of the oil. The most important difference which exists between oils from these various seeds is in the ability to absorb oxygen, and the character of the film produced. It is quite possible for film variations to occur between two oils which have the same composition, as shown by analyses, and the drying capacity of the oil does not measure all its qualifications as the films will vary in toughness, elasticity, lustre, hardness, and in the rate of their formation, which is, of course, the rate of drying. The natural causes influencing the character of the oil produced are the average temperature, the amount of moisture supplied during the growing period, the fertility of the soil, and the freedom from plant diseases. For instance, a dry season will cause the formation of an oil of poorer quality than if a normal amount of moisture had fallen.

**Uniformity.**

It is necessary when selecting seed to obtain that of uniform quality. Special stress is laid on the fact that uniformity in all branches of the industry is very essential, and it is only by commencing with uniform seed, followed by a uniform method of manufacture, that a finished product of uniform quality can be assured.

Telephone B2107

**LOUGH & SHAW**  
QUANTITY SURVEYORSJOHN J. LOUGH  
H. E. SHAWAtlas Buildings  
8 Spring Street

Phone B 3779

Phone Private. Hunter 405

**C. PEARSON SHAW**  
QUANTITY SURVEYORBOND STREET, CHAMBERS,  
2 BOND STREET, SYDNEY

Late Valuer City Properties for Federal Taxation Department.

Telephone City B 3772

**JEFFRIES & DUNNINGHAM**  
QUANTITY SURVEYORSWalter Jeffries  
J. C. DunninghamN.Z. Insurance Buildings  
79 Pitt Street,  
Sydney

Tel. B 1906

**CHAS. A. HARDING & SON**  
QUANTITY SURVEYORSFifth Floor,  
Gibbs' Chambers,  
Martin Place

JOHN HARDING

Telephone : B 3565

**LONEON & HOCKING, Ms.Q.S.A.**  
QUANTITY SURVEYORS

16-20 Bridge St., Sydney.

MR F. MORTON HOCKING

Estab. 1885

**J. ANDERSON WOOD & SONS**  
QUANTITY SURVEYORSPitts Building  
476 Collins Street  
MELBOURNE  
Phone, Central 5810Union Bank Chambers  
68½ Pitt Street  
SYDNEY  
Phone, B 3932



**BEAUTIFUL!**

**DURABLE!**

**ECONOMICAL!**

## *Snowdrop White Paint*

A perfectly amalgamated combination of pure zinc white and refined linseed oil.

It has great covering capacity. Will not chalk, crack, or rub off, but retains its hard glossy surface against the fiercest onslaughts of the weather.

**SNOWDROP** White Paint may be used to advantage for interior or exterior work. The inimitable result it gives helps to consolidate the painter's reputation for reliability.

Order **SNOWDROP**———Australia's Best.

*"Better Results with Mascot Zinc Products."*

Manufactured by

**MASCOT SMELTING WORKS**

OLD BOTANY ROAD, MASCOT

Telephone: Mascot 117 & 340,

Cable Address: "Gearinsons, Sydney"

Queensland Agents: A. W. BUTTON,  
Gough's Chambers, Albert St., Brisbane

Victorian Agents: A. KNOX & CO.,  
312 Flinders St., Melbourne

# STROMBERG-CARLSON

## Telephones and Letter Boxes for Vestibule in Flats



Write or 'Phone for Bulletin No. 2, which describes operation and illustrates various 'phones for use in each flat. :: We will design a system to serve you best.

**Sole Australian Representatives:—**

**L. P. R. BEAN & CO. LIMITED, 229 Castlereagh St., Sydney**

**Distributors:** BRISBANE—S. H. SMITH, 299 Adelaide St.  
ADELAIDE—CHARLES ATKINS & CO.  
LTD., Currie Street.

PERTH—T. MUIR & CO., 99 William Street,  
BROKEN HILL—WHITE & HOSIER.

I think it might interest you to know that during the past eight years great progress has been made in this country, both in the method of production and the quality of the linseed oil produced by Messrs. Meggitt, Ltd. The most up-to-date machinery has been installed, and the entire plant, which has sufficient capacity to handle effectively 28,000 tons of linseed per annum, is now working under the most modern methods known, and it is correct to state that no better linseed oil is manufactured in any part of the world than that which is now being produced by this company.

#### Manufacturing Operations.

I will now endeavour to outline the methods followed in the manufacture of linseed oil.

The first factor to be considered, as already explained, is the quality and character of the seed. The first operation is the removal of all impurities, commencing with oil-bearing seeds other than linseed, as none of these contain oil of as good a quality for the purpose as linseed itself. Second: the removal of non-oleagenous impurities, such as chaff, dirt, pods, etc., which, if ground up, have a tendency to not only darken the oil, but to absorb, and thus lessen the oil production. Another important reason for their removal is that the cake produced is sold for stock feeding purposes on a 98 per cent. pure linseed basis. The next operation, that of grinding the seed, does not influence the quality of the oil; but the subsequent one, that of heating or cooking the ground material, previous to putting it in the presses, does have a very important bearing, particularly upon the colour.

The ground seed is heated and tempered, simultaneously, in a steam jacketed apparatus, especially designed for the purpose. This is done, of course, to accelerate the yield of oil, which it accomplishes effectively. The heating affects the quality of the oil, not so much because the yield is increased, but rather because the oil in the seed is made to dissolve material contained in the cellular structures of the outer edges of the oil cells. This material must be removed at an early stage, if oil of first quality is the aim of the manufacturer. The tempered seed is now placed in the hydraulic presses, where it is subjected to a pressure of two tons to the square inch.

Each of the stages of manufacture, already mentioned, are of varying importance as regards in-

fluencing the quality of the oil, but the final stages, those of filtration and maturity, are the principal factors.

#### Filtration and Maturity.

As the oil runs from the presses, much of the ground seed is carried with it, most of which settles out in the specially designed settling tanks provided for the purpose. There is still a quantity of the finer particles left in suspension, which are readily removed by a proper system of filtration. There are four different systems followed in the filtration of Linseed Oil. The first is to filter the oil direct from the presses, while still warm, and pack. Second, to first cool the oil, then filter and pack. This is certainly a slight improvement on the first method; the efficiency of the filtration depending to a great extent upon the temperature to which the oil is allowed to cool. Third, this method used largely in different parts of the world, with varying results, is to filter the oil direct from the presses, tanking for a specified time, then pack. Fourth, the method followed by Messrs. Meggitt, Limited, and recognised throughout the world as the most efficient, is to filter the oil, as explained above, directly it leaves the presses, cool slowly to atmospheric temperature, then pass over to maturing tanks which are so constructed as to allow for a maximum amount of both air and light to play upon the oil, until such time as maturity is completed, when the oil is again returned through other filter presses, which are fitted with doubled cloths of very fine texture, before being packed into containers for delivery. This method of treating ensures a perfectly clear oil, properly matured, and ready for use by the painter immediately after delivery.

A very important factor in filtration is the filtering medium used, which must be of such a character as to retain all the suspended material which is present in the oil. Variations in the different methods of filtration, just mentioned, make a considerable difference both to the appearance and also to the quality of the oil, and it is easily assumed when a quantity of residue is present in the bottom of linseed oil containers that imperfect filtration is the cause. As the variations in the method of filtration make differences in the quality of the oil, as already mentioned, it is the responsibility of the interested consumer to ascertain, by examination of the different brands of oil he is using, which one is the most free from sediment, and thus make his purchases accordingly. Messrs. Meggitt, Limited, guaran-

## MAXWELL PORTER

### Slate and Tile Merchant, Slater and Tiler

Sole representative for the celebrated "DOONSIDE" Red, Brown, Buff, and Brindled Terra-Cotta ROOFING TILES - - (French Pattern)  
Every Description of ROOFING, and DAMP-COURSE SLATES,  
SLATING, TILING AND SHINGLING CARRIED OUT  
IN ANY PART of the STATE.

107 REDFERN STREET, REDFERN

Phone REDFERN 157



# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

tee double filtration and requisite tankage of every ounce of oil that leaves their works.

This brings us to the question of linseed oil foots. They are composed largely of: (1) Particles of ground seed due to imperfect filtration. (2) Moisture, due to insufficient settling. (3) High melting point fats. In addition, there may be other materials, such as traces of glycerine, and, of course, free fatty acids, which separate with the above impurities.

In the manufacturing of varnishes, special attention must be given to supply oil which will not break under a certain temperature. The majority of that part of linseed oil known as the break is dissolved from the cellular structure of the seed during the tempering process, and is present in all commercial linseed oils.

Almost all liquid oils contain varying quantities of high melting point fats. These are also present in varying quantities in linseed oil. The usual term given to these is saturated fats, which means they have no ability to absorb oxygen, and are not changed in physical properties by exposure to the air. When present in linseed oil they spread out in minute particles throughout the film of the oil when it dries, having a tendency to make it soft, and less durable. The amounts of these fats vary accordingly. Calcutta seed contains the least quantity, and it is for that reason, together with the uniformity of the seed itself, that Calcutta seed is mainly used by Messrs. Meggitt, Limited. The lesser amount of these fats there are present, the greater the ability of the oil to dry, the quicker it will dry, and the tougher and more elastic will be the film produced.

## CHANGE OF ADDRESS.

Messrs. Wunderlich Limited have closed their city office, in Pitt Street, and have transferred the whole of their activities to the head office in Baptist Street, Redfern. Extensive alterations have been completed at the latter place to permit the various lines of the firm being displayed to advantage.

## HOLDSWORTH, MACPHERSON & CO., LTD.

Extensive alterations have lately been completed at Holdsworth, MacPherson's premises in George Street.

The main office has been moved to the ground floor, and the counting-house to the second floor. The

Builders Hardware and Ironmongery Department has been considerably enlarged, and has opened a new show-room on the ground floor.

The Mantelpiece Dept. and Sanitary Sections have been moved from the ground floor to the first floor, as also the electric goods dept.

Numerous new lines have come to hand, such as a complete new stock of Sargent blocks, and new lighting fittings are there to satisfy the most discriminating of customers.

One is immediately impressed, on visiting the new show-rooms, with the very much bigger show that has been made with the goods.

# STERLING EGG SHELL FLAT VARNISH

FOR FIRST-CLASS FINISH

# ART-A-FEC FLOOR VARNISH

FOR HARD, GOOD  
WEARING FINISH

**Sterling Varnish Co.**  
ALEXANDRIA

## NEED FOR MODERN CONVENIENCES IN FLATS.

It is a fact, that the demand for flats in recent months has been easily met. The time is fast approaching, if not already at hand, when the tenant will be in the position of almost naming his terms. The owner of flats will then require to take stock of what value he has to offer for the rental demanded, consistent with competition by others.

The architect will be called upon to include in the design of new flats, and remodelling of old flats, the most modern conveniences and labour-saving devices. It will be on this basis flats of the future will have their worth assessed.

One most important feature, which, in the experience of the writer, is almost universally neglected, both by the owner and the architect, is that of an efficient telephone system. In many cases the telephones have been overlooked until the completion of the building, with the result that their installation causes unnecessary damage, and the cabling detracts from the good appearance. The cost of installing a first-quality telephone system (not the type of telephonette which, in the past has caused so much trouble, and, in fact, prejudiced many people against house telephones), is a very small fraction of the total expenditure, yet it is one of the greatest conveniences.

In this journal is advertised a system of combined flat letter-boxes and telephones. These are beautifully finished, and fit to adorn the most expensive of flats. All the instruments are equipped with standard long distance receivers and transmitters, so that there is no doubt as to the efficiency of the system. Telephones of this class may be adapted for almost any kind of service. The usual arrangement for flats of moderate size is to instal the required number of the special vestibule flush type letter-boxes in the outer entrance hall. Alongside the letter-boxes the vestibule flush type telephone is fitted. In the flat, a flush type wall telephone, or combination set, is erected, and a push-button on letter-box corresponds with the particular flat. It will be seen, therefore, that this system removes the necessity for bells. A visitor or tradesman entering the flat pushes the button associated with the letter-box of the flat required, and this act causes the telephone bell in the flat to ring. Conversation then proceeds, and the flat-dweller is saved the inconvenience of going downstairs, or having tradesmen come up the stairs. It should here be mentioned, that if there be a back entrance for tradesmen, an additional vestibule telephone with a strip of push-buttons may be installed in the back vestibule, to operate the same flat telephones.

In the case of large flats, where a janitor or caretaker is constantly in attendance, there is an addition to the above system in the form of an indicator board in the janitor's room. Any tenant may call the janitor by pressing the special button on the flat telephone. This action drops an indicator on the janitor's switch-board, and gives a continuous ringing alarm, until he answers on his telephone. A still further addition may be made of an electrical lock on the inner vestibule door leading to the flats. This lock is operated by a

second button on each flat telephone. For instance, if a visitor arrives and rings Mrs. Brown, Flat No. 3, from the outer vestibule telephone, and insists upon coming up to Flat No. 3, he could not do so unless the owner chose to press the button on her telephone, and so unlock the vestibule door. This is a refinement which has its uses in special cases. The simple system first described is the one most sure to find favour.

It must be conceded, that with such modern conveniences as the above, the owner of a suite of flats is going to have far less trouble in obtaining tenants than the owner who will not so provide.

The system is only one of many modern conveniences which must sooner or later receive the attention of flat-owners and architects.

Other conveniences, such as electric vacuum cleaners, dish washers, and cooking apparatus, are also means by which owners could not only popularise their flats, but be assured of constant and above the average rental.

Mr. L. P. R. Bean, who has just returned from a trip abroad, and Mr. N. S. Gilmour (both of L. P. R. Bean & Co., Ltd., 229 Castlereagh Street), are trained engineers, and competent to advise architects and owners on the best methods of installation and use of telephone systems and electrical devices.

### WAYGOOD-OTIS (AUST.) PTY. LTD.

In November, 1922, Mr. J. C. Knapp, vice-president of the Otis Elevator Co. of America, arrived in Sydney, and Mr. David Green, managing director of Waygood-Otis Limited, of England, arrived in Melbourne just about the same time that Mr. Knapp reached Sydney.

The Standard Waygood Co. (subsidiary company of the English Electric Co. of Australia) were up to within 12 months ago, operating on an agreement between their chairman—Mr. J. B. Nicholson—and the Waygood-Otis Co. of England, as their agents.

This arrangement has now expired, and the London company sent Mr. Green out last year on a reconnoitring expedition. Mr. Green recently returned to Australia with the vice-president of the Otis Company. These gentlemen are collaborating, and purpose running the business themselves, instead of being represented by agents.

They have taken offices and stores in Sydney, at 4 Nithsdale Street, and in Melbourne at 80 Queen's Bridge Street. Waygood-Otis Ltd. have also taken over Brands' works at Auburn, Sydney, and are getting these into a condition for making their lifts locally. This will of necessity take some little time, as drawings and patterns have to be made to the latest designs from London and New York, but in the meantime machines can be imported through this firm, embodying all the latest ideas, and the rest of the material will be made here from drawings which Messrs. Green and Knapp brought with them.

A young concern, Brands' elevators has made a wonderful record, having risen to a very high position in the lift business within two years.



# IN DAYS OF OLD

RECORDS WERE PRESERVED ON STONE

TO-DAY THEY ARE PRESERVED ON STEEL

## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.



## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.

WRITE FOR INFORMATION

## STEEL PRODUCTS (Australasia) LIMITED

Corner of CASTLEREAGH and REDFERN STREETS, REDFERN, SYDNEY

Phone: REDFERN 819.

Cables: "ADEQUATE."

Postal: G.P.O. BOX 38, SYDNEY

## *The* Ornamental Steel Manufacturing Coy. Ltd.

We are Craftsmen in the Manufacture of

Ornamental Steel Gates  
Entrance Doors and Railings  
Collapsible Gates

Lift Enclosures  
Lift Cages  
Grills and Tenants' Boards

Also Specialists in the Construction of

Steel Ferneries  
Cantilever Awnings

Conservatories  
Fireproof Motor Garages

And all Descriptions of Ornamental Steel Work, for which we  
are prepared to submit Designs and Estimates Free of Cost.

Registered Office—Corner of  
Redfern and Castlereagh Streets :: Redfern

Telephone Redfern 77

This concern was run by A. W. Brand and his brother, and they have earned a very enviable reputation amongst architects and engineers. These two brothers worked for Standard Waygood Ltd. for something like 16 years, and then set out for themselves. They commenced by importing machines from Canada, and later made their own at a factory at Auburn. The Brand brothers have now joined the Waygood-Otis Co., from London. Waygood-Otis Co. seem to have acted wisely in coming to an arrangement with Brands' Elevators, inasmuch as it gives them Australians to run their business, and furthermore, men who are highly respected and practical lift engineers.

Waygood-Otis (Aust.) Ltd. are making machines at Auburn, just outside Sydney, from designs sent out from London, and are making all the rest of the equipment there.

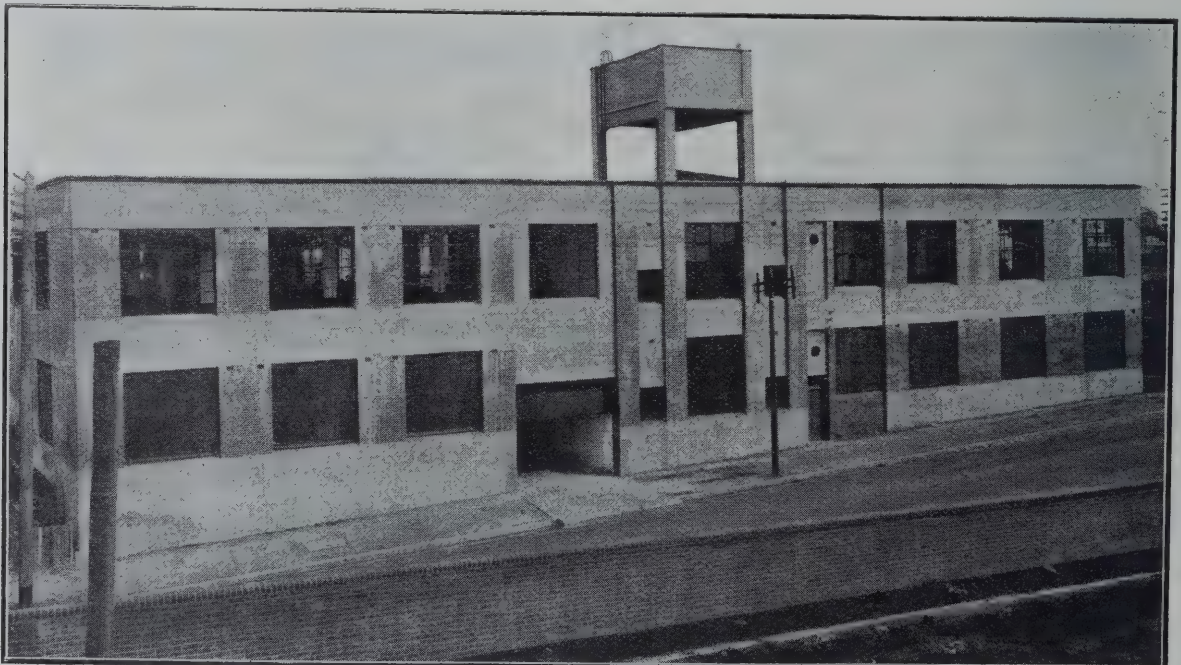
Australian industrialists will be interested to learn that a contract has been let by the Waygood-Otis Co., Ltd., for the erection of extensive factory premises at Rosebery, Sydney. At these works will be manufactured lifts of the most modern construction and design.

#### WORMALD BROS.

The ever-increasing cost of land in our cities and the problem of how to obtain sufficient rentals to justify the expenditure of capital on buildings erected on costly sites is exercising the ingenuity of architects and builders. Every foot of space must be saved within the building—hence it is no longer possible to erect buildings with the thick stone or brick walls of the past. We recall more than one site which under the old conditions was too narrow to contain rooms of adequate dimensions, but which, with steel frame

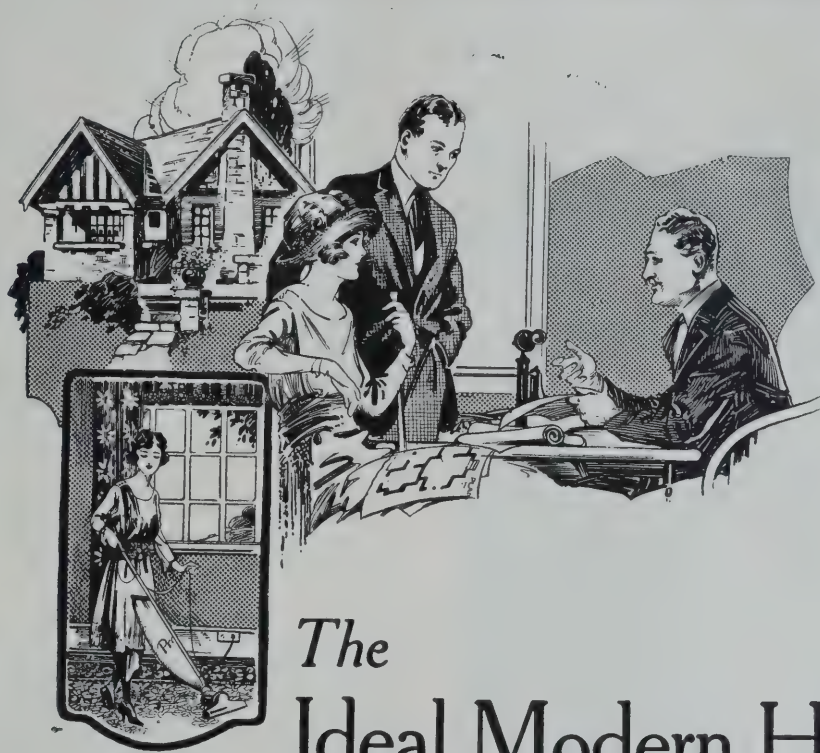
construction and thin reinforced concrete walls became a paying proposition. Such walls are quite unsuited to the ordinary wooden box frame window—in order to show any recess or shadow it is essential to use steel window frames. It is decidedly out of keeping in a modern "fireproof" building to have everything fire-resisting and leave the window frames of combustible wood!

Take, for example, the new premises of the Commercial Banking Co. of Sydney, at the corner of George Street and Barrack Street: how entirely in harmony with the general character of the building are the steel casement window frames on the upper storeys, and the massive steel frames with iron ornamental mouldings in the banking chamber. In the warehouse type of building they are equally effective, as exemplified in such buildings as those recently erected for Isherwood and Bartleet, in York Street; Cassell & Co. Ltd., in Clarence Street, whilst in the factory building good examples are seen in the Golds' Spinning Mills, Homebush; Wm. Arnott & Co.'s new factory, Homebush, and Wm. Cooper and Nephew Ltd., Cabarita, as compared with the wooden box frame window, with its cumbersome weight casings and architraves. For the same daylight opening the steel frame gives a very considerably larger percentage of glass—an important advantage in itself where the demand is increasingly for more light and ventilation. In large window areas the cost of steel frames is, in some cases, even less than wood: in any case architects would do well to obtain quotations for steel frames, as we believe the extra cost of the average size window would be justified when the present price of timber and the difficulty of obtaining properly-seasoned material is considered. That every care is taken in the designing and construction of the steel frames we can state with assurance



Gold's Hosiery Mills at Homebush. Fitted throughout with Waterloo Steel Window Frames.





## *The* Ideal Modern Home

is measured by the comfort and  
convenience it affords.

From cellar to attic electric service is essential to complete a modern home.

Adequate wiring ensures the use of appliances that provide maximum comfort, convenience and economy.

Electric service makes possible attractive table lamps—soft, restful lighting effects—a coffee percolator, an electric toaster.

For laundry work, an electric washer and iron saves clothes, and a whole lot of most disagreeable work.

*The Electric Home means—better living with less effort*

AUSTRALIAN GENERAL ELECTRIC CO. LTD.  
Wentworth Avenue, Sydney

Phone City 3510

Box 2517 G.P.O.

after studying the whole process at the works of Messrs. Wormald Bros., Ltd., Waterloo, which, incidentally, are now being enlarged to nearly double their capacity. Every attention is given to "weathering," and the plant employed includes a special bar-straight-



Commercial Banking Co. of Sydney Ltd., as it will appear when completed. Fitted throughout with Waterloo Steel Window Frames.

ening machine, oxy acetylene and electric welders, portable drilling and grinding machines, electrically driven, and presses and dies for certain of the joints. We were asked to state that the firm will always be happy to show architects and builders over the factory.

#### SOLIGNUM.

#### A Wood Preservative and Beautifier, also White Ant Destroyer.

Solignum is a fluid manufactured by the world-famous firm of Major & Co., Ltd., of Hull, England, which has established a splendid reputation throughout all parts of the world where white ants and the borer wage ceaseless warfare on all articles and structures made of wood. Some of its greatest successes have been achieved in the Soudan, where the climate approximates closely to that of the interior of Australia. So efficacious has it proved in that region that the Wellcome Research Laboratories at the Gordon Memorial College, Khartoum, have issued special reports advising its use on *all* woodwork throughout the country. In accordance with this recommendation it has been adopted by the Government for general use.

#### The Nature of the Fluid.

Solignum is a preservative, which by preventing the growth of fungi of any and all sorts preserves any sort of timber. In Australia "dry rot" is an ever-present trouble. Solignum prevents it.

Solignum is not a paint. It is a stain, which can be utilised in a vast number of ways for purposes of beautification, for when treated with this fluid the wood becomes impregnated with the stain, and the colour has all the appearance of a natural tint, over which, if desired, can be put a way polish. It is made in a variety of shades of brown, green, red, yellow, blue and ebony, and it is worthy of mention that the darker browns give all the effect like that of fumed oak. Wardrobes, given an inside dressing, will last practically for ever, and be most uncongenial habitat for insects of any sort, whilst being altogether impervious to either the white ant or the borer.

Unlike paint, Solignum, when used for decorative purposes, never hides the natural grain of the timber, but enhances it, and as it does not close up the pores of the wood, and its action is altogether chemical, the longevity its use confers is infinitely greater than that dependent upon the presence of an unbroken outside skin.

It is an ideal substance for Australian use, especially in the country. It is so easily applied. No skill whatever is required, merely ordinary intelligence. Posts treated with it will endure for years. It has been proved that piles treated with it will, after being submerged, resist the action of the sea borer for years. It preserves timber against decay from whatever causes arising. It increases the resistance of the fibre of the timber, making it impervious to all external action.

Used on the timbers of stables, pigstyes, poultry houses, etc., it is a safeguard against rats, mice, bugs, and all other objectionable parasites.

A gallon will cover 350 to 400 square feet, and whilst preserving the wood from causes of decay, does not, like many others, discount its advantages by making the timber more inflammable.

#### SIR CHRISTOPHER WREN'S PUBLIC BUILDINGS.

Professor A. E. Richardson, F.R.I.B.A., gave a lecture at University College, University of London, recently on "Sir Christopher Wren's Public Buildings."

Everybody to-day, he said, was eager to say something to add to the fame of the greatest figure in the annals of English architectural history. Wren's works in London alone made a mighty shadow; his influence on the buildings that followed his activity was apparent in all parts of the Empire, for he gave new life to existing traditions of craftsmanship and endowed the conventional scenery of the eighteenth century with a definite standard of style. Christopher Wren appeared as a star of the first magnitude. For half a century he was actively engaged, and to his genius they owed the monuments raised by the public spirit of their forebears who lived in the latter half of the seventeenth century. Wren's executed work was an epitome of the times in which he flourished; almost every phase of history from the Fire to the death of Queen Anne had been recorded by the master. London held no greater monument of the period than



St. Paul's Cathedral, nor a more definite mark of assay than the tradition of brick and sashed window which his wisdom ruled as fitting for the lesser tributaries of the city. Moreover, he was an individualist, and the true exponent of the spirit of compromise that carried the quasi-mediævalism of the seventeenth century to meet the convention of the succeeding age.

The opening years of his career as an architect coincided with the founding of the Royal Society. He engineered the first national observatory for Flamsteed at Greenwich, and revelled in Newton's *Principia*. His was the hand that drew up the first plan for rebuilding London after the Fire, his the directing genius of St. Paul's, the city churches, and a full score of other buildings, his the stimulating spirit that roused the arts and crafts from lethargy. Wren, at the zenith of his power, was famed throughout the country; to-day his name was world-renowned, for he had come to be regarded, not only as the interpreter of the epoch which his works enriched, but as one who was law unto himself.

The buildings he designed meant a great deal to the general public; his contribution to the amenities of the metropolis no less than to the embellishment of the Universities of Oxford and Cambridge, as well as other places, took on a character which made an especial appeal to modern eyes. By adoption he became one of London's greatest citizens, and through fortuitous circumstances the acknowledged arbiter in all pertaining to building matters for half a century. Each branch of building undertaken by Sir Christopher Wren demanded a survey of the various tendencies, political, social and religious, that made up the course of English history during that period preceding the expansion of England as a Colonial power.

It was possible, even in these prosaic times, to walk through the older quarters of London and reconstruct some part of the conventional scenery which rose under the wand of the magician, Christopher Wren. There was to be seen in silvered stone and cheery brick, no less than generous cornice and heavy-sashed window, the homes of the subjects of the sauntering Stuart and the prim Hollander. It had been said that Wren designed in the grand style but spoilt his work by limited selection of detail. There was proof that Wren countenanced small talk in his ornament, yet there were signs in his later essays to show that he regarded the graver sayings of Evelyn to be the best counsel.

A man of his attainments did not require slow preliminary training as an architect. Shrewd and observant, he gathered in a few years data connected with building that would have taken a man less equipped a full-lifetime to encompass. Besides the foregoing qualifications, he was a mathematician and a scientist endowed with a peculiar facility of invention. Wren's architectural training was personal; his shortcomings, judged from the academic standpoint, in so far as design was concerned, belonged rather to those faults of style current in countries other than Italy and France. Wren's sole visit to Paris enabled him to summarise contemporary events and to estimate at their proper value the advantages of discipline and control in the kindred arts, which the genius of Colbert, and the enthusiasm of a band of architects and artists had formulated to express the overweening vanity of Louis XIV.

At that time research work in the classic fields of Rome had only been attempted in a perfunctory manner, while Greece remained closed. With such facts before them, the magnitude of Wren's task was all the more remarkable. The conditions of the period forced him to become the chief agent of the national trait of compromise, but his genius enabled him to develop a definite system between the mediæval and the modern, thereby helping the existing vernacular to a broader platform, and one more in conformity with the European practice of the day.

After giving a sketch of Sir Christopher Wren's career, with a list of his designs and executed works, Professor Richardson said Wren's reputation rested upon his ability to conceive and to conceive largely. His was a figure unparalleled in the history of English architecture, unrivalled for three excellent reasons: first, because he was a man known to his contemporaries as a leader, and rose to instantaneous fame at the time when England was suffering the humiliation of naval defeat and cataclysm; secondly, by reason of extraordinary skill as a builder and deviser of structures, for which in this country there was no precedent; and thirdly, by right of his attainments as a logician and scientist. By contact with Wren's executed works they could understand the character of one who in his day occupied a unique position, merited by talent and industry, and extending its cheerful light, not only on the masses of the late seventeenth century, but upon the subsequent generations who subconsciously have felt the magic spell.—*The Builder*.

**THE PERFECTED PAINT**  
**Velure** is here to meet  
 all the require-  
 ments of the man of good taste,  
 and by using Velure he knows  
 his work always comes again.

**T**HERE are many uses for it, and for High-class Hotels, Offices, Flats and even Tram and Motor Cars, it is the most economical vehicle yet put before users of high-class materials.

Specify VELURE at a lower price, which means a lower cost in the long run.

OBTAINABLE FROM ALL HIGH-CLASS  
 PAINT STORES

**D. O. RAMSAY & CO.**

4 BRIDGE ST., SYDNEY

Sole Agents for Australasia. Phone City 2523



## ARTS AND CRAFTS COMBINED.

It is on rare occasions that one finds that a craftsman is also an artist. There are many men who excel in either one department or the other, and fortunate are they with the ability to stand out over their fellows in both departments of their work.

The trend of the times is towards artistic fittings of both shops and offices. The first essential is that the fittings will give the service required of them. This end can be secured by the expert with tools. But the public of to-day require that the shops which they patronise shall be equipped with fittings that not only give service to the shop-owner, but which also please the eye of his customers. Good workmanship in dingy surroundings is fatal. In many cases it is necessary to have the fittings carried out by one firm, and the artistic side of the decorations executed by different people.

Messrs. Armstrong Bros., 99 Crown Street (near William Street), Sydney, specialise in fitting up shops, offices and warehouses, and in carrying out alterations. The quality of the workmanship in fittings, such as showcases, shelving, window fronts, etc., judging by two examples we saw recently, is excellent. But this enterprising firm does not stop there; it carries out the whole of the interior decorations, and their work demonstrates that they have a true appreciation of what constitutes a decorative scheme, pleasing to the most fastidious. It is for this reason that their clients are always satisfied. This is due to the fact that it is impossible for the customers of their clients to refrain from passing complimentary remarks upon the improved appearance of the shop or office after it has been in the hands of this firm. Samples of their work

may be seen in various new buildings in King and Castlereagh Streets. At one place we looked over, the original work was secured by tender, and so satisfactory was it carried out that a few months later, when additional work had to be carried out, the work was placed direct with them. It is always the way with their work. Once they secure a work by tender they do not have to tender for the same people again.

The reason behind their success is that the whole of the work is under the direct personal supervision of the principals, and both of them are both artists and craftsmen.

## BUSINESS CHANGES.

The business formerly carried on by Montgomerie Neilson & Company, and managed by Mr. W. G. Walker, has been completely re-organised, Messrs. Edmund Bros., of Little Collins Street, Melbourne, having acquired the controlling interest, will now have complete management of the business, and intend operating throughout the Commonwealth of Australia and New Zealand, and opening branch offices in each capital.

Under the new management, Mr. Neilson will now devote his whole time to scientific research work. Included in the firm is Mr. A. Sanderson Edmunds, Ph.C., M.P.S., analytical chemist, who will assist Mr. Neilson in the scientific branch of the business.

The business will trade in the name of Messrs. Montgomerie Neilson, Edmunds & Co., with Mr. J. T. Edmunds general manager.

Mr. M. Neilson left for New Zealand early in April, and expects to be away some time, attending to the firm's New Zealand business.



"Astor Flats," Macquarie Street, Sydney.

Reinforced Concrete.  
Kandos Cement used throughout.

## Established for All Time

THE most stately structures that are the crowning achievements of Sydney's Architects and Master Builders to-day are in Reinforced Concrete,

Founded and established to endure through the centuries, their grace of design and construction will stand as a permanent testimony to the art of the designer and the craft of the builder.

The permanent solidity of the notable building here illustrated depends in no small measure upon the unfailing reliability of KANDOS PORTLAND CEMENT.

### Kandos Cement Co. Ltd.

33-39 HUNTER STREET, SYDNEY

WORKS: KANDOS

Telephones B6741, B6742,

Box 2613 G.P.O.

Cables and Telegrams—"KANDOE," Sydney.



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### THE AFTERMATH OF WAR.

Just after the signing of the armistice in November, 1918, the military authorities in France introduced a scheme of craft training for soldiers, in order that their period of waiting for a boat to carry them home might pass pleasantly by with profit to themselves and their country. Occasionally there comes to light the results of these training facilities.

Whilst every country strives to have its own ideals in architecture, these ideals are influenced by past generations. This is particularly applicable to Australia where we are using the best methods and principles of other countries to gain this end.

Mr. Cyril Kerry, the man we have in mind, whilst waiting for disembarkation decided to study the pavior's art in France and Italy. Those of the readers of this Journal who have visited the Art Gallery at Milan have doubtless seen the wonderful example of marble terazzo work at the four main entrances. This work depicts the arms of Italy in all its bright colouring. After studying the art Mr. Kerry returned home, and was employed by the Sydney Marble and Terazzo Co. Some little time ago a change was made, and Mr. Charles H. Kerry took over the control of the company, and with him are associated his son, Mr. Marni Kerry, and his nephew, Mr. Cyril Kerry.

Mr. C. H. Kerry is better known in this State as a photographer, but he has also had a very extensive mining experience. His mining operations have brought him into touch with many deposits of coloured marbles not yet on the market, and some of these have been effectively used in making marble terazzo. One beautiful mottled green with a variety of shades from pale apple to olive is to be seen at the company's office at Challis House. Another marble of which Mr. Kerry is very proud is ivory tinged with a deep blood colour. This is being extensively used in place of ordinary white marble, and a very artistic effect is secured, especially on grey bases.

The outcome of Mr. C. H. Kerry's mining experience and his nephew's training in Europe is to be

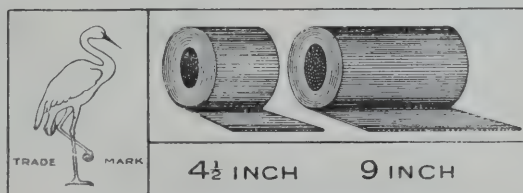
seen in the high quality of the work turned out. Another thing that Mr. Kerry has done is to introduce new ideas into the industry. Sample blocks about seven inches square and  $\frac{1}{2}$  in. thick, each enclosed in a cardboard carton, of the different colour schemes that have already been made standard, are forwarded to their clients. All the time experiments are being carried out in grouping the different coloured marbles together and when an artistic proportion has been found, sample blocks are added to the collection of each client, and the proportions of the various marbles and the bases used are noted for future orders. The result of this is that the client always has a number of samples of marble terazzo in front of him to select from.

The Sydney Marble and Terazzo Company has over 6,000 feet of cement floor space at their works at Alexandria. Right down the centre of the building there is a road for the passage of a lorry, with wide doors at either end. The workmen work under the best possible conditions, as no artificial lighting is required. The durability of marble terazzo work has been shown in many buildings in Europe, but the product of this company has additional strength as a reinforcement of sheet steel matting is used.

Another product of the firm is coke breeze lintels. This is reinforced with piping or steel bars to secure maximum strength on one side, which is clearly marked. In this work they are fortunately placed, as they have a good supply of sand right on the spot, and the result is a square edged lintel with great strength.

Such things as drain boards, marble wall boards for electric switches and metalite steps, etc., are also turned out by the firm.

The quality of the work is excellent, and can be judged by the samples to be seen at the company's office. There is one aspect of the firm's activities that cannot be seen but which plays an important part in its success. That is service. Mr. C. H. Kerry impresses upon all associated with him that satisfactory service is essential and that promises of delivery made



### IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

### A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight.  
Superior, and costs less than cutting from Sheet Lead.  
No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.

to clients must be kept no matter what happens. The result is that everyone in the factory feels that the prestige of the firm depends upon him, and in consequence excellent craftsmanship is turned out to the satisfaction of the clients and the pleasure of those who appreciate beautiful work.

Mr. C. H. Kerry, having brought a fresh mind to bear on marble terazzo work, has introduced a new feature that has already found favour with discerning architects. Instead of grinding the marble up, as is usual for fine terazzo work, fragments of different coloured marbles, several inches in diameter, are set in pink to dark red and grey bases to form panels. This class of work will be in great demand for panelling shop fronts in place of ordinary marble or the usual marble terazzo, on account of the beautiful effects that have been secured.

#### THE CRAFTS AND LIFE.

In connection with the Royal Academy Exhibition of Decorative Art, Earl Ferrers read a paper recently on "The Crafts and Life."

Earl Ferrers said building and architecture suggested body and spirit. It was easy to be told what a building was, or what a body was, but spirit, like architecture, was one of the things they must know for themselves. They spoke of the spirit of a building. The phrase might be metaphorical, but it represented something which they felt did actually exist and which might find an expression in the building's architecture. Architecture was usually thought of as form. Yet the form of a great piece of architecture might be

carefully reproduced from measured drawings, and the result be not architecture at all, but only an unusually tedious building. That elusive something which they called the spirit seemed to make all the difference and perhaps architecture considered not so much in building in a particular form as in building in a particular kind of spirit. The spirit in which they built was bound to affect the form, but what a text-book would describe as architectural form did not necessarily imply the presence of the architectural spirit. Those were some of the thoughts through which he tried to feel his way, and they led him to suspect that form was only a means of expression, and that that art, which no one could quite explain or define, had something to do with that other thing no one could define—spirit.

Of spirit they could not say whence it cometh or whither it goeth, but they knew that without it personality had no appeal to their emotions, no power of expression. There was spirit alive in the works of the old craftsmen—the spirit of a day very different to our own. Classic architecture, with its foreign expression and its full-sized office drawings, was imposed on the craftsman from outside. His craft lost touch with his life. To-day they had rediscovered the craftsman and rediscovered his crafts. The crafts had a wide contact, and linked art with everyday life, and an exhibition such as that at Burlington House was a recognition of that wider fellowship. It was a social landmark no less than a landmark in the history of the arts, and it called attention to that solidarity between the crafts and life which was his

Telephone B2407

### LOUGH & SHAW

QUANTITY SURVEYORS

JOHN J. LOUGH  
H. E. SHAW

Atlas Buildings  
8 Spring Street

Phone B 3779

Phone Private. Hunter 405

### C. PEARSON SHAW

QUANTITY SURVEYOR

BOND STREET CHAMBERS,  
2 BOND STREET, SYDNEY

Late Valuer City Properties for Federal Taxation Department.

Telephone City B 3772

### JEFFRIES & DUNNINGHAM

QUANTITY SURVEYORS

Walter Jeffries  
J. C. Dunningham

N.Z. Insurance Buildings  
79 Pitt Street,  
Sydney

Tel. B 1906

### CHAS. A. HARDING & SON

QUANTITY SURVEYORS

Fifth Floor,  
Gibbs' Chambers,  
Martin Place

JOHN HARDING

Telephone : B 3565

### LONEON & HOCKING, Ms.Q.S.A.

QUANTITY SURVEYORS

16-20 Bridge St., Sydney.

MR. F. MORTON HOCKING

Estab. 1885

### J. ANDERSON WOOD & SONS

QUANTITY SURVEYORS

Pitts Building  
476 Collins Street  
MELBOURNE  
Phone. Central 5810

Union Bank Chambers  
68½ Pitt Street  
SYDNEY  
Phone. B 3932



subject to-day. The fine arts might have a status of aristocracy, but the crafts too had their citizenship. And they had admitted a principle which must carry them further—a principle analogous to manhood suffrage—for where did the crafts and the arts end? If printing might be an art, sculpture an art, building an art, writing an art, binding an art, music an art, acting an art, where among all the things they did, did art stop? Surely conduct, too, might be an art, and the master art of them all.

Where art was concerned, they believed in such things as unity of conception and execution. Perhaps they did not consciously think of applying such principles to their daily lives, though every craftsman knew in his bones that muddle and want of purpose in life was bad art, and that bad art in his conduct of life reacted with woeful damage on his craft. Call it sloth, or call it want of purpose, it was one of the seven deadly sins in art as elsewhere. Personally he preferred the craftsman's phrase—want of purpose. The artist enjoyed his work and took the drudgery in his stride. If a man who was not an artist did not enjoy his work, he supposed he was normal, and sat down content to suffer one of the most piteous of moral diseases. Except among craftsmen, the disease of not enjoying work was almost universal nowadays. It was a most serious thing for the community and incidentally was a great hindrance to the growth of sound art. Perhaps the artist's first duty as a citizen was to spread the infection of a cheerful countenance. They did not want the great art of living to be drawn back under a system that

gendered to bondage, nor that wider human fellowship, on which the arts depended, to have its sentient powers deadened and become incapable of taking its part. Yet that seemed to be just what was actually happening.

It had been said that a nation got the sort of art it deserved, and undoubtedly the vigour and quality of art was very greatly influenced by the quality of the community at large. An impossible community did not produce an epoch of great art; a selfish one produced the artist who was offensively preoccupied with his own personality. If really great art was what they desired, it was not enough for them to walk their mystic way by themselves. They needed also to tackle the problem at the community end. The conception of conduct as an art seemed to offer a common ground, a point of contact with all and sundry. The artist as artist had some grasp of the secret of living; he had a gospel to make known, and he wanted him to regard conduct as one of the arts in which he felt an interest as a responsibility and which he could help to lift on to a more ideal plane.

All art seems to involve four elements—the inspiration, the worker, the material he worked in, and the fellowship or sympathetic audience. They had thought much lately of the artist and his ideals, of his craft, his tools, his materials, and methods, and meanwhile, the fellowship side, the broad human community side of it had somehow gone wrong. They had tried to lecture their public instead of getting in touch with it, and they were missing the broad human basis for really great achievement.

## Snowdrop White Paint

For  
interior

No matter what the job, you will obtain the best and most durable results by using **SNOWDROP**. Its smooth, fine quality and great density make it a factor in economy as well as good appearance.

or  
exterior  
work

**SNOWDROP** White Paint mixes readily with any pigment, its gloss acting as an additional protection against wind, sun and rain.

For that **PARTICULAR** contract enlist **SNOWDROP** as a worthy aid to your reliable workmanship.

*"Better Results with Mascot Zinc Products."*

Manufactured by

**MASCOT SMELTING WORKS**

OLD BOTANY ROAD, MASCOT

Telephone: Mascot 117 & 340

Cable Address: "Gearinsons, Sydney"

Queensland Agents: A. W. BUTTON,  
Gough's Chambers, Albert St., Brisbane

Victorian Agents: A. KNOX & CO.,  
312 Flinders St., Melbourne

Most craftsmen needed that outcome of sympathy which provided the cost of materials and of daily bread, but he was thinking still more of the sympathy itself. Those were days when they needed to think in the large and review their position. They were heirs of the nineteenth century—it was great—but they must live and learn. There was an analogous discovery which they seemed on the verge of making. They had been inclined to think of art itself as something added to life as a glued-on ornament. They had hardly yet realised that it was concerned with the whole structure and fabric of life, and that solidarity between art and life was a necessary condition of greatness. The thoughts and interests of the artists were the thoughts and interests of the community, and the spirit underlying the art went through and through life. They needed to give that spirit room to grow again, for the world needed more of the artist's spirit and of the leadership of artists, while

### THE PERFECTED PAINT.

The Railway Commissioners have for the year commencing 1/7/'23, again adopted "Velure" for the painting of the ceilings of railway carriages, being fully aware of the advantages given by "Velure" for light reflection.

In adopting "Velure" for factory or workroom ceilings, the lighting bill must be reduced considerably, and again the eyesight of the employees is a consideration that cannot be overlooked.

A very interesting find was made by one of the foreman painters for the Queensland Government Railways very recently.

A railway carriage was run into the workshops for a general overhauling and repainting. The surface showed a bronze green effect and was dead flat. A few of the painters employed commenced cleaning off the old surface, and found underneath the green, a



The interior of the composing room of The Birmingham Printers Ltd., the ceilings of which are painted with "Velure."

art needed the support of wider human sympathy, and both needed clearer vision and more unity and purpose to their outlook.

The nineteenth century had been described as a period of individualism. Men lived their own lives, they specialised, they worked on details, they could see the beauty of what they called the features of a building more easily than the beauty of a building, as a whole. Everything went on wheels. The State seemed to exist of itself, and their relationship as responsible members of a community was almost lost sight of. Since then they had seen that a community might crash, and the individual be broken with it. They were becoming a little alive to the nature of the common weal and to the splendour of that broader view of life. Art, too, needed to be conceived of with the broader sweep, the larger majesty which should appeal to and command and serve not some men only, but humanity.—*The Builder*.

tuscan red. The under surface was perfect, with a splendid gloss, no blisters or cracking showing up.

The green surface effect was really a film of soot, grease and dust, formed by the residue from sulphur fumes, and after taking this off, a splendid red stood out in almost a full gloss. This paint was "Velure," and had been on the carriage for ten (10) years, as was proved on records held by the Department as to when this particular carriage was painted.

Therefore "Velure" is as good outside as it is in, and no specifications would be complete without "Velure" was included.

The accompanying illustration shows the effect that can be obtained with modern lighting when the ceilings are coated with a paint that will reflect light. It shows the lighting arrangements of the composing room of The Birmingham Printers Ltd. One of the most difficult matters to arrange in a composing room is efficient light, and the general manager of the firm,



# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

in speaking of the lighting system installed, says, "Our ceilings are coated with 'Velure' paint, which secures a perfectly reflected light."

The agents are Messrs D. O. Ramsay & Co., 4 Bridge Street, Sydney.

## THE WOMAN'S NICHE IN ARCHITECTURE.

(By Mrs. Manning Robertson, in *The Builder*.)

Certain catch-words are endowed with strange persistency, and, if you happen to be the wife of an architect, you must always be ready to hear that your husband is blessed in having married you, because "a woman is such a help in architecture." To the extent that everything is "shop" to the architect, a wife may be said within her limitations, to help or hinder as much in this profession as in any other, but the contention that there is definitely a woman's view of architecture can only lead to the melancholy conviction that women have been, and still are, the greatest obstacles to good sense and good taste in house design. This interpretation in no way refers to women as architects; indeed, every possible reinforcement to the minority, professional or amateur, who wishes to learn and to help is to be welcomed, not for the value of the direct influence on men, but because of the need for improvement in the outlook of the average women. Feminine enthusiasts have the habit of declaring that a woman is naturally interested in "insides" and is therefore more practical than a man in the arrangement of fittings. This is a generalisation that cannot be translated into fact; architects are still seeking for the fuel-saving range that is mistress and maid-proof, and does the woman exist who does not believe that the sun puts the fire out? The so-called artist who will sacrifice service and responsibility to the luxury of self-expression is a misfit common to either sex, but, taken as a whole, women have everything to learn and little to teach in mechanical craft or artistic imagination. For proof of this we have only to turn to the individual output of women in other arts during half a century, or to their baleful influence generally on the architecture of the past two generations.

In regard to their actual creative work, women have given a creditable account of themselves in painting, sculpture, and music, but, as women, they have con-

tributed nothing to revolutionise or influence methods and the tendencies of their artistic spheres, and this paucity of direct result is a contrast to the achievements of Madame Curie in the field of pure science. It is when their training is transmitted to the educational world that the benefits become effective. When, however, we turn to architecture there is no creative output to consider, but we have in Villa, England, and High Street, Shopland, the unmistakable and hideous evidence of the architecture that women as clients like, and which to our sorrow the house agents and the men of commerce provide for them by the thousand.



*Velure* is here to meet  
all the require-  
ments of the man of good taste,  
and by using Velure he knows  
his work always comes again.

THERE are many uses for it, and for High-class Hotels, Offices, Flats and even Tram and Motor Cars, it is the most economical vehicle yet put before users of high-class materials.

Specify VELURE at a lower price, which means a lower cost in the long run.

OBTAINABLE FROM ALL HIGH-CLASS  
PAINT STORES

**D. O. RAMSAY & CO.**

**4 BRIDGE ST., SYDNEY**

Sole Agents for Australasia.

Phone City 2523

Until the emancipation of women, dating roughly from the 'eighties, men were not only the creators, but the monarchs of the houses they occupied. Architecture faithfully reflected their needs, their positions and their tastes, and down to Victorian days the responsibility of providing, and, indeed, of furnishing the home devolved entirely on the husband. Such an unnatural and unequal division of responsibility cannot be supported, but, judged by results—which include on the man's count the bourgeois England of the mid-nineteenth century—the eruption in brick and stucco that followed the first jubilee was a disastrous reaction. It can be no coincidence that the Villa epidemic began with the date of feminine emancipation. When she discovered herself, the woman also discovered that she possessed sensibility and that the proper field for its exhibition was the home. The late Victorian man was not altogether displeased; while disclaiming that his really important mission of making money could yield to æsthetic trivialities, he was content to let his "little lady" have her way, and the house agent was not slow to provide the necessary outlet which the new-found sensibility required. Reaction from the drab mood of Victoria Street invaded the suburban home. Every extra, inside and out, that could be described as ornament, every artifice and contrivance that made the residence look more expensive (and become so in upkeep) and, let us admit the best that can be said for it, every satisfaction to a crude craving for the romantic-picturesque, which is best expressed in a travesty of Elizabethan gables and timbering is gratified. If anyone doubts that small house architecture and furniture is designed primarily to attract the female, let him glance at the advertisements in any magazine. The young wife, charmed with the purchase made, dominates every page. Occasionally an admiring and immaculate male appears in the background, but he is more usually illustrated waving good-bye (local city train time-table inset) or on Sunday rolling the lawn of the model bungalow. Sometimes there is shown the little vista leading to the compact garage for his motor bicycle (sidecar attached) which, you will observe, does not look like a garage.

If the sceptic is still unmoved let him consult the experience of the speculative builder of middle class house property. The answer must be conclusive, for in no other type of building does the "woman's view" so hopelessly obstruct architectural beauty. Those who acknowledge this deplorable situation do it in no anti-feminist spirit, the blame rests even more with the men, because if the women's interest is misguided, the normal man's lack of interest in all things æsthetic has made the tragedy possible, and further accounts for the prosaic dullness of business erection in a

modern town. The two chambers of horror uppermost in the writer's recollection are the sitting-room parlour of that pinnacle of celibacy, an Irish parish priest, and the European saloon drawing-room of an Indian Maharajah.

Can we, then, definitely affirm that women "in a confused heap" (as Chesterton puts it) have worse taste than men? If they have we are led to question the utility of women architects. The achievements of the women students who have already entered the profession alone make such a charge ridiculous, but, at the same time, their success emphasises the contract between the trained woman—in the cultured sense—and the normal ignorant majority. Women would certainly appear to have worse taste to the extent that they are worse educated than men, and are further handicapped by economic dependence—one of the most restrictive factors to development. Luckily, the effect of the educational renaissance to which women themselves, co-operating with the experience and the knowledge of men, have so directly contributed must soon be felt, and constitutes the great hope of the future. With it, the growing financial independence of women will tend to abolish the three-farthings outlook, fatal to good judgment, which creates the lure of the primitive imbecile, as displayed in the draper's window.

The final responsibility for improvement will, however, fall on the men. As they get the Government, so they have the women they deserve. Indirect influence is the mother of creative force, and, if the architectural profession develops the revival it has re-introduced into England, women will come to occupy the niche—so long empty—that of helping the public to appreciate good work.

#### CHARM OF TUDOR BUILDINGS.

By Cyril Wontner-Smith, F.R.I.B.A.

The revival of terra-cotta as a building material in the last fifty years has led some people to imagine that the application of ceramic decoration to English buildings is a modern innovation, and, therefore, an offence against æsthetic standards.

This is a complete fallacy. For 300 years, it is true, the use of terra-cotta in this connection suffered an eclipse in this country. But in the Tudor period to which English domestic architecture looks back with pride as the time when our country's supremacy in this art was firmly enthroned, architects and builders made free use of terra-cotta to beautify and enrich the mansions of the nobles and the wealthy.

The vogue of imposing moulded clay ornamentation upon the brick walls which composed the characteristic feature of Tudor dwellings, was undoubtedly due

ESTIMATES  
GIVEN

## Sydney Marble Terazzo Company

TEL. REDFERN  
1313

*Terazzo & Metalite Steps, Marble & Slate Switchboards. Coke Breeze Re-inforced Lintels.*

City Office: No. 12 Third Floor, Challis  
House Martin Place.

Telephone City 1438

Works: Botany Road Alexandria (opposite  
Waterloo Public School)



# IN DAYS OF OLD

RECORDS WERE PRESERVED ON STONE

TO-DAY THEY ARE PRESERVED ON STEEL

## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.



## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.

WRITE FOR INFORMATION

## STEEL PRODUCTS (Australasia) LIMITED

Corner of CASTLEREAGH and REDFERN STREETS, REDFERN, SYDNEY

Phone: REDFERN 819.

Cables: "ADEQUATE."

Postal: G.P.O. BOX 38, SYDNEY



## The Ornamental Steel Manufacturing Co. Ltd.

We are Craftsmen in the Manufacture of  
**Ornamental Steel Gates**  
**Entrance Doors and Railings**  
**Collapsible Gates**  
**Lift Enclosures**  
**Lift Cages**  
**Grills and Tenants' Boards**

*Registered Office—Corner of*  
**Redfern and Castlereagh Streets**  
**REDFERN :: :: Telephone Redfern 77**

to Italian inspiration. The Renaissance had made Italy the fountain of all the arts; and Italian architects and craftsmen were to be found in positions of influence in almost every court in Europe, the honoured guests of kings and princes. As Leonardo da Vinci passed his old age at the French Court in Amboise, and as Francis I. employed many Italian craftsmen upon his new wing of the Palace at Blois, so his contemporary, our own Henry VIII., appointed an Italian, Trevisano, to be his royal architect.

Trevisano's influence and actual supervision are displayed in two of the most conspicuous examples of Tudor architecture extant—Sutton Place, near Guildford, and Layer Marney Hall, in Essex. Sutton Place, now the Surrey seat of the Duke of Sutherland, and for a long period the residence of the late Lord Northcliffe, dates from 1523, when it was erected by Sir Richard Weston, a prominent figure at the court of bluff King Hal. The house, which is unfortified in design, is built entirely of brick and terra-cotta. The terra-cotta, of a warm tint mellowed with age, is used in window frames and mullions, doorways, string courses, labels, enriched parapets, plinths, quoins and finials. Apparently between 40 and 50 moulds were used for the decorative panels and other enrichments.

The striking feature is the rich decorations of the parapets, where a long line of panels adds adornment without creating any feeling of fussiness or incongruity. It is interesting to recall that the late Frederic Harrison, who in his earlier life resided at Sutton Place, in restoring the "long gallery" replaced from castings the terra-cotta mouldings to the windows, which had been removed by a previous owner.

Trevisano's hand may also be traced in the terra-cotta enrichments of another famous survival of authentic Tudor architecture. This is Layer Marney Hall, in the county of Essex, a satisfying specimen of the early sixteenth century house. It was built by Sir Harry Marney, a Privy Councillor, who in his capacity as Captain of the Guard to Henry VIII., would be brought into contact with the Italian architects.

In Layer Marney Hall the whole of the enriched work to parapets and windows is executed in buff-coloured terra-cotta, which, in contrast to the warm red of the brick walling and the blue vitrified diaper work that embellishes nearly all the plain surfaces, produces a charming colour scheme. By the use of terra-cotta adornments in the shape of dolphins disporting themselves over semi-circular panels, as parapets, the somewhat ponderous mass of the tower is relieved from the suggestion of fortification.

Presumably, Italian influences are responsible for the terra-cotta decoration of two Tudor manor houses in Norfolk—East Barsham and Great Cressingham. The latter, now a farmhouse, is one of the most fascinating examples of old English brick and terra-cotta even in East Anglia. Above the string course the whole wall surface is panelled, the vertical lines of the panels and the curved forms of delicate tracery forming a rich adornment. The tracery in bold relief is executed in buff-coloured terra-cotta, a particularly interesting feature being the monogram and crest (a falcon on a hand) of the original owner.

Built into the friezes and dotted about in the angle

turrets of the tower of East Barsham Manor House, are small rectangular plaques of terra-cotta, in which the royal badges of the lion rampant, fleur-de-lis and Tudor rose, modelled in high relief, repeatedly recur; and interspersed with them, the heads of a man and woman, which in their modelling are as individual as the terra-cotta enrichments at Layer Marney and Sutton Place.

In the decoration of his magnificent palace at Hampton Court, Cardinal Wolsey certainly did not hesitate to enlist the aid of Italian craftsmen and their favourite medium. Plentiful evidence is found in the internal enrichment of his rooms. Externally, the terra-cotta medallion busts of the Roman emperors, set in the brickwork of the turrets on each side of the gateways, and Wolsey's arms and motto on the clock tower over the inner side of the gateway, are all of Italian craftsmanship.

Enough has been said to dissipate any idea that the modern architect who employs the plastic and durable medium of terra-cotta to embellish brick buildings, is guilty of a Victorian outrage against the canons of constructional taste and fitness. On the contrary, the use of terra-cotta for such purposes is actually a revival of the general practice in the most characteristic period of the architectural art of England.—*The British Clayworker*.

#### THE ACOUSTICS OF THE AUDITORIUM.

At University College, University of London, recently Mr. G. A. Sutherland, M.A., gave the first of a series of lectures on "The Acoustics of the Auditorium."

Mr. Sutherland said, in view of its importance to the community, the subject had received singularly little attention from physicists in this country. From time to time a more than ordinarily bad case served to focus public attention on the problem, and at such times it was customary to state that the question was one of pure chance, to which science had nothing to say. The purpose of those lectures was to dispel the atmosphere of mystery that surrounded the problem, and to show that a scientific solution had been found so nearly complete that anything in the nature of an acoustic horror, such as the London County Hall, was said to be, was quite inexcusable.

Extensive practical use had been made of that solution in America, both in predicting acoustical quality in advance, and in removing existing defects.

To understand and apply the method, it was necessary to be acquainted with the nature of sound, and the main phenomena of sound propagation. Sound was a form of energy; it could not be got rid of by being broken up and scattered; it remained audible until it was converted into some other form of energy. It was produced either by a single sharp impact, or by a succession of sharp impacts, of a vibrating body on the air or some other medium, and was propagated by a form of wave motion, each wave consisting of a condensation of the medium followed by a rarefaction. The ear was affected by such waves when the number of vibrations per second was between 16 and 38,000; but the range of sounds used in music was between 40 and 4,000 vibrations per second. Sounds



were musical when the vibrations were periodic or regular, and sounds of different pitches all travelled with the same speed, viz., about 1,120 feet per second, in air at 60 deg. F.

A sound wave proceeded from a point source in ever-widening spheres, until it reached the boundary of a medium in which its speed was different. Part of it was reflected back through the first medium, and part of it was refracted through the second. The laws of reflection and refraction were well known and definite, and both phenomena played their part in the distribution of sound in an auditorium. With certain shapes of hall it sometimes happened that a reflected set of waves was superposed on a direct set, in such a way that condensation fell on condensation, and rarefaction on rarefaction.

That produced increased intensity. If, however, it happened that the rarefactions of one set fell upon the condensations of the other, then the result was silence. That was known as interference, and might easily be demonstrated by experiment. The usual result in practice was some points of silence and some excessive loudness. Sound waves would also bend round obstacles; the lower the pitch of the sound, the larger the obstacle round which it would bend. The sound of an explosion readily bent round buildings and blew in the windows of houses on the side farther from the place of the explosion. That bending was known as diffraction, and a consequence of it was, that if a wall was to scatter the lowest musical sounds, instead of reflecting them regularly, it would have to be coffered to a depth of about three feet. For speech, a depth of 3 to 5 inches would be required.

A sounding body might force another near it to vibrate in unison with it; if the second had the same natural period it would do so readily and strongly. Those forced and sympathetic vibrations played their part in the distribution of sound in an auditorium. Musical tones derived their quality from the fact that they were composite in character; any one tone being made up of a fundamental note which determined its pitch, and a number of other simple notes, known as overtones. The presence of these different notes could easily be shown by experiment, and it could be shown that different overtones, or the same overtones with different relative intensities, produced different qualities. Vitruvius (*De Architectura*, Liber C, Cap. VIII.) spoke of dissonance, circumsonance, resonance, and consonance in the theatre. The substitution of the words interference, reverberation, echo, and the retention of the word consonance, made his analysis applicable to the problem of the modern auditorium.

With a speaker on an open plain the sound wave spread out roughly as a hemisphere. If a large audience was on the plain the lower part of the wave was soon absorbed, and those at the back could not hear. To raise the speaker and place a wall behind him in order to reflect forward the back part of the wave, and to raise the rear seats, produced a great improvement, and the result was, in effect, the Greek Theatre. But much of the wave still escaped into the open. Adding walls a roof prevented that escape, and the further additions of galleries to bring part of the audience nearer the front affected the general form of the

modern auditorium. The necessary and adequate conditions for satisfactory acoustics were sufficient loudness, freedom from distortion, and freedom from the indistinctness that was caused by the overlapping of successive sounds. A solution of the problem would show how to express such considerations numerically; would state definite desirable values for them, and would also enable them to determine in advance the values they would have in any auditorium whose plans were available.

The sound waves proceeding from a speaker addressing an audience reached the boundaries of a room unless they were absorbed on the way. At the walls they were reflected or transmitted or absorbed in proportions which depended on the nature of the walls. Reflections occurred at least twenty-seven times a second in a room 40 ft. sq.; the reflections reinforced the original sound and ensured sufficient loudness, which was the characteristic virtue of the modern auditorium. But if the walls were hard there was little absorption at each impact, and the sound would die out very slowly, producing reverberation, which was the commonest defect in modern audience halls.

The Greek Theatre, without walls and a roof, did not suffer from reverberation; that was its merit. Its acoustics were good, but not, as was commonly assumed, perfect. With the absence of reverberation there was also absence of sufficient loudness, as the use of resonant vases bore witness.

It was characteristic of the attitude that had been adopted to the whole question, that because vases were

# STERLING EGG SHELL FLAT VARNISH

FOR FIRST-CLASS FINISH

## ART-A-FEC FLOOR VARNISH FOR HARD, GOOD WEARING FINISH

Sterling Varnish Co.  
ALEXANDRIA

supposed to have contributed to the good acoustics of the Greek Theatre, they were sometimes employed in buildings of to-day, though the defects in the two cases were due to directly opposite conditions. Small wonder, if, with so little attempt to appreciate causes, results seemed to be governed by the merest chance.

Reflection ensured adequate loudness everywhere in a room with no dimension very great, and where the speaker faced the whole audience. At the same time it produced reverberation, or slow decay of the sound. If that decay lasted for three seconds for a word spoken in an ordinary tone of voice, nine syllables would be heard simultaneously, and the result would be indistinctness. For speech reverberation should be reduced to the minimum consistent with adequate loudness. In a small room there was no difficulty there, and the reverberation should lie between half and one second. In a larger room a longer period, of about one-eighth second, was tolerable; probably because in a large room a speaker expected to have to speak more slowly. In music the case was slightly different; some prolongation and blending of the notes being desirable, and giving what was known as fullness of tone. For chamber music, 1.1 seconds, and for orchestral music 2.3 seconds were satisfactory. In concert halls complaints from musicians were more often on the score of inadequate than of excessive reverberation.

Besides loudness and reverberation, reflection might, in larger rooms, produce an echo—a defect that occurred when the reflecting wall was more than 37 feet away. In that case, the direct and reflected

sounds succeeded each other at an interval of more than one-fifteenth of a second, and were heard as separate sounds. Even when the wall distance was 30 feet, there would be confusion, though not a distinct echo. In the case of a curved wall sound foci were produced, and there would be points of undue intensification and of comparative silence. Echoes were inconsistent with distinctness, and sound foci, even when not combined with echoes, were inconsistent with uniform loudness. For satisfactory results echoes and sound foci must be eliminated as completely as possible. The necessary treatment would be considered in the next lecture. The general principle underlying the cure of reverberation was the introduction of material that would absorb the sound. The reverberation in an empty house was well known, as also was the improvement that could be affected by introducing hangings and wall coverings.

Exhaustive experiments in America had examined the relative absorbing powers of different materials used in building, and a formula had been developed which enabled the reverberation period for a sound of given intensity to be calculated in advance of construction. If  $T$  was the time of reverberation,  $A$  the total absorbing power of the room and contents, and  $V$  the volume of the room:—

$$T = .05 V/A, \text{ if the measurements were in feet;} \\ \text{or } T = .164 V/A, \text{ if the measurements were in metres.}$$

The value of  $A$  was calculated by multiplying the different surface areas and units in the room by their appropriate co-efficients, some of which are given below:—

Open window .....	1.000
Glass .....	0.027
Brick wall, in cement .....	0.032
Brick wall, painted, two coats .....	0.017
Plaster on tile .....	0.025
Plaster on lath .....	0.034
Wood sheathing .....	0.104
Felt, 6.6 cm. thick .....	0.75
Audience per sq. metre .....	0.94

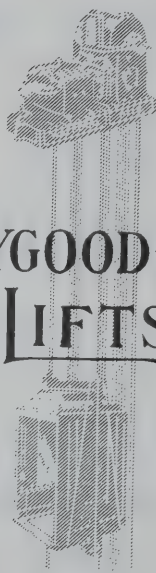
These co-efficients were ratios, and were the same, whether feet or metres were used. In the case of units, the following were some of the values:—

	For Feet.	For. Metres.
Audience, per person .....	6.34	0.44
Ash chairs, per chair .....	0.016	0.016
Cloth cushion, per single seat .....	1.95	0.135

The first building to which the calculation was applied before construction was the new Boston Music Hall, which, in that way, although seating 1,000 more persons, was designed to give the same reverberation period, *viz.*, 2.3 seconds, as the Leipzig Gewandthaus, famous for its good acoustics. It was interesting to note, that if the Gewandthaus had been reproduced in the same materials, but on an enlarged scale, the reverberation period would have been 3.0 seconds, and would have been considered excessive. Thus a scale copy was not necessarily an acoustic copy.

As the absorbing power of a substance was found to vary for different notes, distortion of complex musical tones might be produced by introducing absorbent material. The balance to be struck in a case of that sort must be determined by musicians, and it

## WAYGOOD-OTIS LIFTS



ALL PARTS STANDARDISED

Fitted in the Principal Buildings  
Throughout Australia

Waygood-Otis (Aust.) Pty. Ltd.

4 Nithsdale Street, Sydney, New South Wales  
80 Queen's Bridge Street, Melbourne, Victoria



would be useful to have the judgment of musical authorities on that point, collected in a suitable form. The prevention of excessive reverberation by the introduction of suitable material, had been successfully accomplished, amongst other places, in the Little Theatre in New York, and in St. Paul's Cathedral in Detroit; the difference in that respect between the original designs and the final corrected ones being shown by reverberation curves, the method adopted being illustrated by slides. Similar illustration was given of one of many cures after construction—the case of the House of Representatives in the Rhode Island State Capitol in Providence.

The apparently incompatible demands of speech and music as regarded reverberation in a hall that was to be used for both, could be met by the use of resonant materials, such as wood panelling in the neighbourhood of the orchestra. That gave fullness of tone without excessive reverberation. The effects of resonance had, however, not been adequately studied in a scientific manner.

Adequate loudness in the auditorium was assured if every member of the audience received within one-fifteenth of a second as much sound as he would receive by a direct beam if situated not more than fifty feet from the speaker. In a small room, it was automatically attained if the speaker had an uninterrupted view of the whole audience, no member of which was at greater distance from him than fifty feet. In a larger hall, reflecting surfaces must be so arranged that enough reflected sound reinforced the

direct beam within one-fifteenth of one second to make up the fifty feet intensity. The ceiling proved one obvious surface, and in a long room some advantage might be gained by splaying the side walls at the speaker end. Where the room was higher, and included galleries, it might also be advantageous to splay the ceiling. In general, the position and inclination of suitable reflecting surfaces might be found by drawing the early progress of the sound wave on an "acoustic diagram," according to the known laws of reflection of sound. Where the surfaces were broken up diffraction must also be taken into account, and the diagram became more complicated. From the known co-efficients of absorption of the surfaces on which the sound fell, it was possible to calculate whether the intensity condition given above was satisfied.

The diagram also gave information as to early reflected paths that exceeded the direct path by a length of more than seventy-five feet. Those involved a time difference of more than one-fifteenth of one second, and would thus tend to produce confusion or echo. The offending surfaces so located could be covered by the material necessary to reduce reverberation, and thus rendered innocuous. Curved walls, as might be inferred from the fact that all whispering galleries were dependent on the presence of curved surfaces, were almost necessarily a menace to good acoustics. Not only were there main foci of sound, but there were also subsidiary foci due to the phenomenon of interference. Thus the intensity distribution at head level in a room with a barrel ceiling, whose centre of

**PROCURABLE FROM ALL LEADING MERCHANTS, PAINT DISTRIBUTORS,  
MOTOR ACCESSORY HOUSES, AND SHIP CHANDLERS**

**Supplied in  
WHITE  
and  
52 Artistic  
Tints  
in  
 $\frac{1}{2}$ ,  $\frac{1}{4}$ ,  $\frac{1}{8}$   
Gallons**



**RIPOLIN**

Is the Best Protector against the destructive action of Climate and time. RIPOLIN PAINT is known all the world over as the Paint which Beautifies—protects—and gives the best results always.

Full Particulars:

**L. A. CORMACK, Factory Representative**  
4 UNDERWOOD ST. (off 35 Pitt St.)  
**SYDNEY**  
Telephone B 3284



**PAINT**



**A Coat of  
RIPOLIN  
is more  
Durable and  
less costly  
than a coat  
of flat and  
a coat of the  
best varnish**



**INTERSTATE AGENTS:**

**MELBOURNE:** LOUIS J. EGLETON, 379 Flinders Street. **ADELAIDE:** CLARKSON LTD., 124 Rundle Street.  
**BRISBANE:** S. J. SQUIRES & CO. LTD., 171 Elizabeth Street.

curvature was on the floor, was a complicated interference pattern, involving points of silence and concentration. As those points varied for the different components of the same tone, great distortion, as well as non-uniformity of loudness, resulted.

The conditions of loudness and distinctness were especially important in a council chamber, where the speaking member did not face the whole audience and might turn his head from side to side when speaking, and where the entering and leaving councillors, during the progress of a speech, added to possible conversation in undertones, provided a disturbing noise. The London County Hall failed to fulfil the two conditions for loudness, the uninterrupted path, and the provision of hard reflecting surfaces in suitable positions. The Press was relegated to the worst gallery, and the resulting punishment of publicity had been at least commensurate with the crime. The ceiling was so high that it could not be used as a reflecting surface, for any sound returning from a good reflector in that position would constitute an echo. The ceiling has thus to be made absorbent. If it could be made perfectly so, then all sound reaching it would be lost. As it was, it was made partially absorbent, and instead of a discrete echo there was confusion.

For a large room, where the speaker faced the whole audience, as long a reverberation as 1.6 or 1.8 seconds

was tolerable, probably because, in a large room, the speaker expected to have to speak more slowly. In a council chamber a short period was specially important; but in the County Hall it would probably be unsafe to reduce the reverberation lower than about 1.6 seconds, because that would mean a reduction in intensity in the galleries, and also on the floor of the house. Nothing could now make the acoustics good in the same sense as they would have been good if the building had been designed in the first instance as a council chamber and not as a monument; but some improvement could be effected as far as the floor of the house was concerned, by providing a large, inclined reflecting board which councillors might face when speaking.

Within the last year prizes had been awarded in competitions for designs of council chambers in Calcutta, Bengal, Colombo, and Cairo. Those were all of the monumental type, and would serve as acoustic warnings. It was time that something was done to effect a change, and architects who acted as assessors in competitions would do a public service if they specified the reverberation period appropriate to the purpose for which a building was intended, and refused to accept any design which did not conform to it. In the case of the Bournemouth Music Pavilion, that might still be done before it is too late.—*The Builder*.

## Architecture and Modernization

**K**EEPING abreast of the times is largely a matter of keeping pace with the progress of Architecture, for it is Architecture that sets the pace in the Modern Development of Building Design and Practice.

The splendid example of Modernization here illustrated shows how the old becomes transformed into the new by the combination of Architectural and Building Craftsmanship with Kandos Cement.

**Kandos Cement Co. Ltd.**

33-39 HUNTER STREET, SYDNEY

Telephones B6741, B6742



The new Queensland National Bank building, Pitt and Hunter Streets, Sydney, to which four new floors have been added in concrete. Kandos Cement was used.



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### THE BEAUTIFUL "RIPOLIN" ENAMEL.

The qualities of "Ripolin" enamels are well known to discerning architects, and it was only to be expected that a large quantity would be used in the Commonwealth Bank of Australia, the work being carried out by Messrs. Lyon Cottier & Co.

Amongst other buildings for which "Ripolin" has been specified are the new wing of the Women's Hospital, Crown Street, and the new Astor flats in Macquarie Street.

"Ripolin" is being extensively used by body builders and Messrs Holdens Motor Body Builders Ltd., who recently ordered 315 gallons of assorted colours, say that they have not found anything equal to it.

The agent is Lindsay A. Cormack, 4 Underwood Street, Sydney.

### MODERN LIGHTING.

At the present time Sydney is undergoing reconstruction and new buildings are appearing in all quarters of the city. Many of these new buildings will have numerous offices wherein efficient lighting will be one of the main features. Electric light is certain to be the medium used, but there are many ways of utilising this light to the best advantage. Probably the best way of all is that used by Home Electric, of King Street, Sydney. This enterprising firm uses Solar Day Lite units for lighting offices, factories, shops or for any purposes where the best lighting system is required.

There is no doubt that good lighting in offices means efficiency, and for this reason those in charge of the construction should at the very least examine all methods of lighting available.

Solar Day Lite units have demonstrated that they give a perfect light without any of the glare that is so harmful to those whose occupations keep them under the ordinary electric light.

There are many different types of units available and all of them are pleasing to the eye. It is a scientifically designed and perfected lighting unit using modern low or high wattage lamps. The bowl

of the unit is made of specially prepared Brilliantine glass, so moulded that the reflector and bowl are in one piece. This feature, in addition to proper diffusion and reflection eliminates ceiling shadows and makes it practically dustproof.

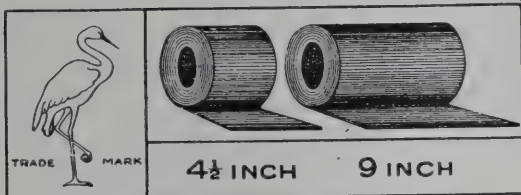
Home Electrics have a large assortment of Solar Day Lite units to select from, and the architect in charge of current work should investigate this system before making arrangements for the lighting of the offices or showrooms. There is no doubt of the decision once the units have been thoroughly examined.

### SYDNEY'S SKYSCRAPERS.

All those concerned in the erection of the new buildings in course of construction in Sydney at the present time will be interested in the excellent catalogue prepared by Waygood-Otis (Aust.) Pty. Ltd., 4 Nithsdale Street, Sydney. It depicts the different kinds of passenger and goods lifts manufactured by the firm and in addition contains a fund of information that is valuable to those who intend to instal lifts for any purpose.

In designing a building for commercial occupation it is of great importance to see that an efficient lift service is provided, and of adequate capacity for dealing with the requirements of the building. In office buildings there is a special rush of passengers in the early morning, in the middle of the day, and again in the late afternoon, and for these reasons the firm advise that it is better to use several lifts of smaller capacity than to have one or two of larger size, which carry more people but have a longer interval between the various trips in consequence.

For large stores, where a number of people have to be handled, the firm recommends the employment of escalators, which give a continuous service, and so deal with crowds more rapidly. Escalators are employed with satisfaction on many of the underground railway stations in London. The company is introducing a new design of escalator, with a view of reducing the cost, and this can be built with either a plain or cleat step and with a width of two feet



## IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

## A PERFECT DAMPCOURSE

4 1/2 in. and 9 in. x 20ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight. Superior, and costs less than cutting from Sheet Lead. No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.

between balustrading, the carrying capacity being 4,000 passengers per hour at a speed of 90 feet per minute, designed for a vertical rise of 60 feet. A similar escalator can be furnished with a width of four feet between balustrading, and having a capacity of 8,000 passengers per hour.

The catalogue contains much of interest to architects, and those interested can obtain copies from the firm.

#### SIR CHRISTOPHER WREN AS A SCIENTIST.

Sir Christopher Wren is so well known as an architect that the fame he enjoyed as an inventor and scientist in his own day seems incomprehensible. His name does not come down to us in association with specific physical laws, as do those of Newton, Boyle or Harvey, his contemporaries; his position, however, as head of the Royal Society seems to have involved him in so much labour in assisting and directing his colleagues in their experiments that time did not permit him often to engage upon prolonged investigations of any one subject on his own account. His versatility, while it fitted him admirably for his position, as director, since it enabled him to sympathise with the experiments of others in a great many different directions, seems to have been accompanied by a distaste for purely repetitive and confirmatory labours—estimating rightly his great powers of thinking on new subjects above mere industry and patience. It seems to have been his habit to propound the subject of experiment to others after he had satisfied himself by preliminary investigations that the course of study

would be fruitful. In this connection may be instanced his reluctance to obey the Royal command to produce microscopic diagrams of minute animals, and, in the end, the work was undertaken by Dr. Hook, who gracefully gives Wren credit in the preface of his *Micrographia*, where he expresses his diffidence, in treating a subject where that great master had preceded him: "The Hazard of coming after Dr. Wren did affright me, for of him I must affirm that since the time of Archimedes, there scarce ever met in one Man, in so great a Perfection such a mechanical Hand and so philosophical a Mind."

Perseverance in astronomical studies was, doubtless, nearer to his heart; and the model of the moon also required by the King is recorded as having been made from his own observations. This model seems to have been satisfactory in that when tested in different directions of the light the shadows thrown by the modelled mountain ridges could be verified by comparison with those of the original during specific phases. A great many of Wren's scientific activities were spent upon the devising or improvement of instruments for observing or recording natural phenomena. His weather wheel and weather clock were designed with an automatic attachment by which a pencil record was kept during the twelve hours of night.

The diversity of Wren's interests is indicated in "A Catalogue of New Theories, Inventions, Experiments, and Mechanick Improvements, exhibited by Mr. Wren, at the first assemblies at Wadham College, in Oxford, for advancement of Natural and Experimental Knowledge called then the New Philosophy; some of which, on the Return of the Publick Tranquility, were improved and perfected, and, with other useful Discoveries, communicated to the Royal Society." The list includes, among many others, inventions in astronomy, land surveying, physics with "Several New Ways of Graving and Etching; many Curious and New Ways of Turning; to weave Many Ribbons at once with only turning a Wheel; Divers Improvements in the Art of Husbandry; Divers Engines for raising of Water; a Pavement harder, fairer, and cheaper than Marble; to grind Glasses; a Way of Imbroidery for Beds, Hangings, cheap and fair; New Ways of Printing; Pneumatick Engines; New Designs Tending to Strength, Convenience, and Beauty in Building."

The invention of "A Speaking Organ, articulating sounds," seems quite up to date in this age of gramophones, as does also "To Stay Long under Water" and "Ways of Submarine Navigation." "A Compass to play in a Coach or the Hand of the Rider," which appears in this list, figures again in a letter written by Wren to "the Right Honourable the Lord Brouncker (Preparative to His Majesty's Entertainment at the Royal Society, Oxon, 1661)." It was proposed to make up this ingenious toy as a present to His Majesty.

An anatomical experiment in which Wren and his colleagues took part is recorded by Mr. Boyle, whose dog formed the subject of a successful attempt to introduce a solution of opium into the vein of a living creature; Wren is given the credit of devising the method employed and the instruments for fastening the vein in position, and for injecting the opium. The

## PLEASE NOTE!!

WE SELL

*Cartridge, Detail, Tracing,  
and Sectional Paper,*

*Tracing Linen, Drawing Ink, and all  
Draughtsmen's Requirements.*

*Our "Globe" Brand Ferro Prussiate  
and Helio Papers give entire  
satisfaction.*



*Ask to see our Samples and Quotes.*

**W. E. CRAVEN & CO.**

Sole Agents for Allott Jones & Co., England,

5 HAMILTON STREET,

Phone: B 3869.

SYDNEY.



sleepiness of the dog after the operation demonstrated the efficacy of the drug administered in this manner, and it is pleasant to read in Boyle's record that his dog recovered and grew faster than before. The fame of this experiment led to others in transfusion of blood—a process which is so largely used at the present day. Wren himself gives instructions for an "Operation of Cutting out the Spleen of a Dog with Safety, and Method of Cure."

Though Hook and Boyle seem to have behaved fairly to Wren, not every collaborator was so just, and many of the master's inventions were stolen, and if published at all appeared under other names.

It may have been a recognition of his lack of worldly wisdom in this matter of his scientific experiments and discoveries that encouraged Wren in later life to persevere with the architectural side of his career where all his powers of research and his mechanical ingenuity could be developed and exhibited in a manner recognisably his own. The architectural works of Wren convey such an impression of assurance as would tempt the spectator to imagine that other departments of science were in an equally forward state. This is, however, very far from having been the case.

Wren knowingly set himself to combat the power of tradition where it was opposed to ascertainable truth. At the same time he was no wild revolutionary and had a thoroughly English way of believing in the innocence of a dogma until he could demonstrate its error. References to the false astrology in which

the times and seasons and the phases of the heavenly bodies were consulted in the administration of drugs are made by him the prelude to the proposal to start a genuine "astrology" based, not upon hearsay, but upon ascertained fact. Knowledge of the physical conditions which surround mankind seemed to him to be the necessary foundation of well-being.

Tradition was to be respected if it would bear examination, but his common sense would have been offended had he been required to accept any doctrine that was incapable of rational consideration. It was the elucidation of a mystery that charmed him, not the mystery itself. His mental attitude towards things old and things new was singularly serene, neither to be distributed by extremes of bigotry nor scepticism.

A history of the seasons was proposed as a fit subject of study, with foodstuffs, the causes of dearth and plenty, and the connection between weather conditions and price. Wines, coffee, and tobacco, though foreign, were to be inquired into since they were in general use. Eggs and seeds were to be observed in their processes, hatching or germinating, and a stock of rabbits prepared for physiological experiment.

Under the heading, "A Catalogue of Philosophical Tracts by Sir Christopher Wren," the Parentalia includes forty-four titles of Wren's published works on mathematics, trigonometry, spherics, the comets, Saturn, telescopes, longitude, the magnetic needle, velocity of a ship in sailing, improvement of river navigation, theory of the laws of motion, etc.

# Mascot Zinc White

## NON-POISONOUS AND WATERPROOF

THE painter who wants the most durable white obtainable, insists upon Mascot Zinc White because of its great density, its covering capacity, and its long life.

No other white in oil gives quite the same perfect results as this genuine zinc in oil.

It may be mixed with any colour, dries with a hard glossy finish like enamel, and cannot crack, chalk, or rub off.

It is economical and most satisfactory for either interior or exterior work. Ask for **MASCOT**.

Use also **MASCOT** High-grade Zinc Oxide and **SNOWDROP** Ready-mixed Paint.

*"Better Results with Mascot Zinc Products."*

Manufactured by

## MASCOT SMELTING WORKS

OLD BOTANY ROAD, MASCOT

Telephone: Mascot 117 & 340

Cable Address: "Gearinsons, Sydney"

Queensland Agents: A. W. BUTTON,  
Gough's Chambers, Albert St., Brisbane

Victorian Agents: A. KNOX & CO.,  
312 Flinders St., Melbourne

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

His scientific inquiries into the strength of materials of construction are sufficiently exemplified in the buildings he erected, where prolonged study by no means brings with it the familiarity which breeds contempt. It has been observed recently that Wren pointed out as a defect the use of a rubble core in the piers of the Gothic cathedral, Old St. Paul's, and then perpetuated the same defect in his new work. This is not in accordance with the text, where the old building is described by Wren as suffering from the inclusion of "rubbish" stone—not rubble—and the comparison of the core in the present piers with some examples of Gothic work will demonstrate that Wren probably improved very considerably on the older manner.

Chamber's *Cyclopædia*, published in 1783, gives as the design of the Royal Society, which seems also to have been the aim of Wren himself "to make faithful records of all the works of nature or art, which come within their reach; so that the present as well as after ages may be enabled to put a mark on errors which have been strengthened by long prescription; to restore truths that have been neglected; to push those already known to more various uses; to make the way more passable to what remains unrevealed," etc.

Whatever further investigation may bring to light to his credit as an investigator and an author of scientific "Tracts," his resolution to proceed by experiment even if it involved planting "Crab-stocks for posterity to graft on" joins Wren to the body of men of all ages who have made the increase of knowledge the first consideration of their lives, and who have become in consequence scientists in the strictest meaning of the word.—*The Builder*.

## WOODWORK AND MODERN BUILDINGS.

At a recent meeting of the Institute of British Decorators, London, Mr. T. P. Bennett, F.R.I.B.A., read a paper on "Woodwork and its Application to Modern Buildings."

The lecturer said wood used structurally had many limitations. It was a material which was subject to movement on account of shrinkage and was only fire-resisting when used in beams of considerable size to which heat could not readily gain access. Its carrying power was limited, and it was only, therefore, in

buildings of a domestic character that it was a structural possibility. Within these limits it was employed universally, but not always to the best advantage from a decorative point of view. In many cases it was covered with plaster when it could be exposed; in others hidden by brickwork. There was no reason why that should be so; so far as plastering was concerned it was little more than a fashion which originated in the middle of the seventeenth century as a side issue of the classic style in architecture.

Externally the half-timber building had a tremendous fascination, principally, no doubt, because that combination of materials was so full of life and interest, because of the contrast in colour values and its truthful construction. Suitably applied, half-timber work was still a possibility in country districts. It was, however, subject to two restrictions; (1) if used as solid timber backed with the necessary thickness of brickwork to make it fire-resisting it was expensive; and (2) if used as surface decoration its true function in the building. However, one occasionally found a client who was really interested in the appearance of a building and in half-timber construction, and its use then became a possibility. In other cases one might be allowed to call half-timber work a method of surface decoration, much as the Romans decorated their buildings with marble sheeting and constructed them of concrete. The great point of the matter was that half-timber work could only be successful if it was developed from the study of old examples—examples in which design actually grew from the necessities of construction. The half-timber work of the jerry-builder was anathema, and the reason for the strong objection of the man of taste to such work was its over-elaboration and senseless application. Its correct use was an instance of power and rectitude arising from knowledge. Even the most elaborate examples of the fifteenth and sixteenth centuries created a sense of simplicity by their composition and massing.

Coming to individual features, the doorway offered the greatest field and was susceptible to the greatest variety. The Georgian architects above all others realised the value of wood in the connection. The scope in that direction was unlimited, the precedent inexhaustible.

The legacy left by the nineteenth century at one time





## THE INITIALS OF A FRIEND

---

You will find these letters on many tools by which electricity works. They are on great generators used by electric light and power companies, and on lamps that light millions of homes.

They are on big motors that drive the wheels of Industry and on tiny motors that make hard housework easy. By such tools electricity dispels the dark and lifts heavy burdens from human shoulders. Hence the letters **G.E.** are more than a trade mark. They are an emblem of service—the initials of a friend.

---

### The Australian General Electric Co. Limited

Corner Goulburn St. and Wentworth Avenue, Sydney  
and Corner Queen and Little Collins Sts., Melbourne

#### AGENTS:

ADELAIDE, S.A.—Charles Atkins & Co. Ltd.,  
88-90 Currie Street.

PERTH, W.A.—Charles Atkins & Co. (W.A.) Ltd.,  
"Mazda House," 894 Hay Street.

BRISBANE, Q.—The Engineering Supply Co. of  
Australia Ltd. (E.S.C.A.), corner Edward  
and Charlotte Streets.

TASMANIA—Oliver & Oliver, HOBART and  
LAUNCESTON.

threatened to make the stucco porch a perpetual feature of English architecture. Stucco had its merits, but one ought not to forget the just claims of wood. In the majority of cases the stucco porch had been painted, and the maintenance of the one was, therefore, no more costly than that of the other. One could hardly leave native wood exposed unless he was prepared to pay for the use of oak, and that was not always possible even if it were desirable. It was hyper-criticism to object to paint as a means of providing a protective covering to wood or any other material. One might just as logically condemn rough-cast as a covering to brickwork. The wood doorway, therefore, might quite reasonably have fresh prominence in the minds of contemporary designers and again become an element of design of the first importance, as it was in the days of the building of the brick fronts of Gower Street and Bedford Row in London, Church Row, Hampstead, and the delightfully simple facades of the provincial towns which developed at that period.

In recent years the attention of the architect had been re-diverted to the wood cornice of Georgian times, and one might yet find students measuring brilliant examples of that feature executed in the reign of George V.

Passing into the building, the use of wood became much more universal and possessed unlimited possibilities. Again the "all over" carpet and the ubiquitous plasterer had threatened obliteration. The floor was the first point which might receive consideration. It was often an economy and not an extravagance to build the ground floor of wood bricks, girtsawn or polished, as the case might be, and to leave such a floor uncovered save for rugs. Similarly, the ceiling might, in many cases, have the first floor joists in evidence with plaster between, and far from being a senseless reproduction of an old style it was actually a sensible and logical way to use the materials of construction as decorative members. The casing of steel joists with wood panelling was just as sound as wrapping them in expanded metal and plaster. There were in existence a number of examples of complete wood ceilings of simple construction which might quite well be used as a basis for modern decoration, particularly as there was now a tendency to over-light rooms in order to capture the sunlight and to provide adequate ventilation. Over-lighting could be softened by a dark ceiling instead of being intensified by one with a strong reflecting surface.

In work of moderate size the wood staircase was still almost universal, but again they were too much tempted to restrict designs to one type of detail. Questions of cost loomed so largely in the background that the architect was only a free agent up to a certain point. At the same time, knowledge and skill could often simplify an elaborate treatment and make its application feasible.

The walls of rooms might be covered with wood panelling of many degrees of richness. The most simple was obtained by a system of rectangular panels without mouldings, depending upon their proportion for effect. For the design of that work inspiration might be drawn from the great periods of English domestic architecture—Elizabethan, Jacobean, and

Georgian. Panelling had a unique position as an effective wall treatment. It preceded the Victorian wallpaper and it followed the stonefaced interiors and the arras. It survived at the present moment beside those features, with a very marked tendency to increased use.

There was much fascination both in the effect and in the detail in the work of a larger scale, which was typical of the Georgian period. Some examples obtained effect with the minimum of cost, merely by the application of mouldings planted on the face of a plain field of wood. An excellent instance of work of that character was to be found in the panelled room from No. 5 Great George Street, Westminster, now in the Victoria and Albert Museum. The simple Georgian ovolo with raised and fielded panels was familiar to all, and in many ways stood unrivalled for stateliness of effect. The panelled room from Clifford's Inn, in the same museum, was a beautiful instance of that treatment. Adam panelling, with its shallow relief and applied ornament, could often be adopted where an expensive treatment was not necessary just as it might be elaborated to provide some of the most lavishly decorated interiors.

Either in conjunction with, or in the absence of, panelling the doorway and fireplace provided a sound and satisfactory method of treatment. Wooden interior doors were by no means limited in historic architecture to the modern idea of four or five panels, and in the cottages and medium-size houses from the fifteenth and sixteenth centuries onwards were found many examples as a basis for modern interpretation. A few of those might be mentioned, such as that in a house at Exeter dated about 1600, in which the door carried on the lines of the wall-panelling in small rectangular panels, the top two being carved. In that case a great deal of the interest attaching to the door was aroused by the old beaten ironwork hinges and door furniture.

The introduction of wood into the fireplace might commence with a simple system of brick and timber. From that point one might elaborate into the wood architrave, frieze and cornice, pilasters, columns, and innumerable variations; the great point of the matter was that sound and satisfactory decoration might be obtained in wood if the material were reasonably and properly handled. They all knew and condemned the senseless chimney-piece and overmantel of the joinery catalogue, and had no doubt marvelled that the beautiful examples of English domestic work had been ignored in preparing these designs.

It was with pleasure one noticed the tendency of American architects to study Italian interiors, contrasting extensive plaster surfaces treated in light tones with carefully placed wood detail in doors, windows, and other more or less isolated positions. Where decoration was strictly limited in that way it was often possible to concentrate upon it a considerable amount of care and study, and at times substantial expenditure.

A use of wood which had been gaining increasing favour was the wooden shop-front. The shop-front developed from the ordinary domestic window, and the early examples were only very slightly removed from their prototypes. At a little later stage the



# IN DAYS OF OLD

RECORDS WERE PRESERVED ON STONE

TO-DAY THEY ARE PRESERVED ON **STEEL**

## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.



## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.

WRITE FOR INFORMATION

## STEEL PRODUCTS (Australasia) LIMITED

Corner of CASTLEREAGH and REDFERN STREETS, REDFERN, SYDNEY

Phone: REDFERN 819.

Cables: "ADEQUATE."

Postal: G.P.O. BOX 38, SYDNEY



## The Ornamental Steel Manufacturing Co. Ltd.

We are Craftsmen in the Manufacture of  
**Ornamental Steel Gates**  
**Entrance Doors and Railings**  
**Collapsible Gates**  
**Lift Enclosures**  
**Lift Cages**  
**Grills and Tenants' Boards**

Registered Office—Corner of

**Redfern and Castlereagh Streets**

**REDFERN :: :: Telephone Redfern 77**

possibility of development on original lines became evident, and in London there were quite a number of instances. The only point which must be observed in shop-fronts was the district surveyor, whom he recently found insisted upon 4in. from the extreme projection of the moulding to the centre line of the party wall. The effect of the window was not necessarily suitable for all trades, but it was worth noting that even a draper now considered that a satisfactory shop-front enhanced the value of his display and was preferable to a sheet of plate glass surrounded by a ridiculous strip of brass.

The remaining problem of wood treatment was its finish. On the one hand, some enthusiasts wished to banish all protective materials and use nothing but the native wood, and, on the other hand, utilitarian minds, demanded paint or its equivalent in every case. It was a commonplace thing to say that the proper course lay between those two extremes. In French panelling, for example, a considerable amount of carving was introduced and found to be more satisfactory if carved in oak. Much of that panelling, therefore, was executed in hardwood, but the designer intended from the commencement that paint should be the medium for his surface treatment and consequently he ignored grain, figure, or knots and jointed his panels where necessary for convenience and not for effect. That seemed a logical treatment of oak, and he saw no reason why it should not be covered with paint if that system of decoration were most suitable. Similarly other kinds of wood panelling might be used and painted without in any way contravening the canons of good taste or the laws of the highest art.—*The Builder*.

#### THE ECONOMICS OF LIGHTING.

At a recent meeting of the Royal Technical College Architectural Craftsmen's Society, Glasgow, Mr. H. C. Wheat, M.I.E.S., M.A.I.E.S. (Chief Illuminating Engineer to the British Thomson-Houston Co., Ltd.), read a paper entitled "Artificial Illumination of Buildings."

It should be obvious to anyone, he said, that a large proportion of artificial light was lost, and cases where that loss reached one-half, or even one-third, of the whole, were not uncommon. Perhaps more important was the disastrous effect of many artificial lighting installations on the eyes. A very general reason why better results were not obtained was due to the fact that few people gave the consideration that was due to the installation of artificial light.

One of the principal points in which artificial lighting failed was that too much of the light went where it was not wanted, and too little where it was needed.

Light was simply due to radiations emanating from a heated body. When the temperature was sufficiently high, the vibrations of those bodies reached a velocity which gave the impression of light—first, red heat, and then, as the temperature was further increased, bright red, yellow, and white, ultimately reaching violet; still shorter wave lengths were known as ultra violet. Light rays travelled in straight lines unless interfered with by an intercepting medium at a velocity of 188,000 miles per second. Light falling on a surface was resolved into three parts; one, being reflected,

did not enter but was thrown back, the second was absorbed and converted into another form of energy, usually heat, and the third was transmitted. No body reflected, absorbed, or transmitted all radiations falling upon it, but all three of those factors were present in some proportion.

An incandescent electric lamp was purely an energy transformer converting the energy supplied to it in the form of electricity into radiant energy of such wave length as to be sensible in the form of light. The advent of the gas-filled or half-watt lamp had entirely changed the conditions of electric lighting. Gas-filled lamps covered a wide range, extending units as small as were previously available through a variety of sizes to units as powerful as arc lamps, and they could all be made to furnish illumination at considerable economy in most cases. In addition, the fact that the light distribution of any one lamp could be varied within wide limits by means of suitable auxiliaries meant that the gas-filled lamp could be used as a general illumination over a wide range of ceiling heights, whereas previously general illumination could only be satisfactorily effected in comparatively lofty buildings. That was due partially to the large dimensions of the lamps themselves, and partially to their being limited to high candle-powers. The physical dimensions of the lamps themselves were often of considerable importance, and in that respect gas-filled lamps frequently offered very considerable economy for a given candle-power. It was not intended to suggest that local lighting with individual lamps was never required, but it was much less necessary than was generally supposed, and should be avoided where possible on account of the strain imposed on the eye by the contrast between the high intensity on the local objects in comparison with their surroundings, even supposing that the lamp itself was properly shaded, which was usually far from the case. According to statistics, scientific illumination increased the output in factories from 8 per cent. to 15 per cent., and a saving of a few minutes per day could more than pay, in time, for the cost of operating the lighting installation. Statistics also showed that improved lighting reduced accidents.

Artificial lighting could be classified roughly under four different headings, according to the method in which the light was distributed.

- (1) Direct lighting—in which the majority of the light was, or should be, directed towards the objective to be illuminated.
- (2) Indirect lighting—in which the majority of the light was, or should be, directed on to the ceiling, from whence it was diffused and reflected on to the objects to be illuminated.
- (3) Semi-indirect lighting—in which a portion of the light was directed on to the ceiling and thence reflected, and another portion went directly through a diffusing medium towards the object to be illuminated.
- (4) Diffused lighting—in which the whole of the light passed through a diffusing medium, portions going directly to the object to be illuminated.

Each system had certain distinctive characteristics, advantages, and disadvantages.



There were certain rules to be observed in connection with artificial lighting, some of which applied particularly to certain systems. The lighting units could be placed above the line of ordinary vision, and they should be of such a size and so placed as to give a satisfactory light at any position, provided they were properly equipped. By that means lamps were removed beyond the reach of individuals, which considerably reduced the risk of their being interfered with, reduced eye strain, and made the surroundings generally more cheerful. Where conditions were such that local lighting was absolutely necessary general lighting should always be provided as well, otherwise the contrast between the brightly lighted local area and the surroundings was most trying to the eyes, if not actually detrimental to the eyesight. Further, local lighting alone was conducive to accidents owing to the fact that one's eyes could not adapt themselves instantaneously to the dark surroundings. An interior having only local lighting neither looked well nor did it afford opportunity for proper supervision.

The size of lamps to be employed for general lighting should be regulated by the ceiling height, which in turn regulated spacing. For a given shadow effect, the lower the ceiling the smaller the lamp, quite apart from the fact that it was desirable to keep larger lamps farther away from the eyes. Experience alone would determine the relation between the height and the size of unit for any given class of work, and it was impossible to lay down any rules for this.

For good illumination there must first of all be sufficient light generated so that objects were easily seen. That was dependent on the amount of light which they reflected, and meant that dark ones would require a higher intensity than light ones in order to appear equally bright. Second, the illumination must not be too high, or the brightness would tire the eye owing to the muscular effort required. Third, bare lamps must not be tolerated in the field of vision on account of the glare, which not only reduced the ability to see, but was injurious to the eye. Fourth, flickering lights or streaky illumination should be avoided, owing to the strain produced by the eye continually striving to adapt itself to the variations in intensity. Fifth, reflected glare must be avoided. That was a most important fault, due to light reflected from polished surfaces, such as glazed paper, polished wood, and metal surfaces. Sixth, the direction of the light must be carefully considered in many cases. When individuals had been accustomed to working with natural light from one direction they would perhaps find it necessary to change their positions when using artificial illumination, and might have to work in an unnatural and therefore disadvantageous manner, although the installation might provide plenty of light.

It was therefore apparent that:—

- (1) Lamps should be equipped with some form of reflector or diffuser so as to redirect the light where required;
- (2) The reflector should also act as a shade to protect the eye from the naked filament, or the diffuser should be so arranged that the intrinsic brilliancy of the light source was reduced to an agreeable value.

- (3) The lamps should, as far as possible, be placed high so as to remove them from the line of normal vision, because light coming from above was more natural and consequently more agreeable, and because, as a rule, shadows were considerably foreshortened.

The best method of obtaining the effect of semi-indirect lighting—namely, inverted lighting with a visible luminous source—was by employing an indirect fitting which had one or more translucent panels. The greater part of the light from the lamps was thrown on to the ceiling by suitable reflectors, and by a special patent arrangement a small portion softly illuminated the translucent portion of the fitting by means of a suitable diffuser. In that way the efficiency of the installation was maintained, and it was possible to employ a variety of glass in the translucent panels in keeping with both the colour and style of the decoration of a building, and to preserve its decorative appearance without irritating glare.

Where fittings were necessary they should be as unobtrusive as possible, blending with the building as a whole rather than asserting themselves, placed in positions where they did not mar the lines of the building or dwarf its height by night, and avoiding as far as possible grotesque effects of light and shade. Many interiors could be successfully illuminated without the use of any fittings at all, as usually understood.

## STERLING EGG SHELL FLAT VARNISH

FOR FIRST-CLASS FINISH

## ART-A-FEC FLOOR VARNISH

FOR HARD, GOOD  
WEARING FINISH

Sterling Varnish Co.  
ALEXANDRIA

That was a direction of development which might advantageously be followed farther than it had, but it necessitated suitable provision for the lighting equipment in the structure and consequently careful planning in the early stages of the design. Few cornices, for instance, either furnished space for the necessary equipment or facilities for access so that installations might be properly maintained as originally installed.

The effects that could be produced by different forms of artificial lighting were not sufficiently appreciated. It was well known that architects devoted a great deal of consideration to the appearance of buildings by daylight, but they apparently neglected to consider the effect which the artificial lighting installation would produce. By closer co-operation between architects and illuminating engineers much might be done to improve the appearance of buildings under artificial illumination, particularly if the lighting was considered during the early stages of design instead of being left until last (until all the available money had been appropriated), as was often the case.—*The Builder*.

#### PANELLING.

At the Geoffrey Museum, London, recently, Mr. J. Dunkin (of Robersons Ltd.) gave a lecture on the subject of panelling, which was illustrated by a series of lantern slides.

In the course of his address the lecturer said the use of panelling to any extent in interior decoration

started from the sixteenth century; it was employed to cover the plastered walls, both as a low dado, with tapestry covering the upper part, and also for covering the entire walls. English oak was the wood generally used, of which at that time there were ample supplies. The name given to this early panelling was wainscotting, and owing to the best class of oak being used for its construction, it became customary to call the wood so used wainscot oak. The term wainscot oak was in regular use until recent times, but owing to the many sources of supply that term had been dropped, and oak was now known under the name of the country from which it was imported.

English oak had great decorative qualities and was very durable; like Spanish mahogany it improved with age. The charm of oak was the figure and soft, brown colour. Silver grain was another name by which the figure was known, and was of very hard texture, and in course of time stood out slightly from the face of the wood. In antique examples of oak panelling that was very noticeable. In modern reproductions that appearance was obtained by scratching the surface with wire brushes or other tools to wear away the softer grain quickly. Oak panels cut to obtain the greatest amount of figure were of a nature to split, warp or shrink. They were almost indestructible in ordinary use. But little shrinkage occurred in the width of a panel, where the medullary ray was parallel to the surface; if any contraction of the wood occurred it would be on the outer edge, and in the thickness. The panels of old oak panelling would be found to have stood well because they had been nearly all quartered in that way. A proof of the quality of oak when figured was the fact that the panels of Stuart, Elizabeth and Jacobean panelling were of the thinnest possible substance.

Up to the nineteenth century panelling was entirely made by hand, and that fact accounted for much that was interesting in the old panelling. The back part was usually left very rough. The mouldings worked by the scratch or moulding plane did not show that hard and exact line which was the characteristic of modern machine work. Irregularity in detail was one of the charms of the early renaissance work in England.

The method of construction of old panelling by mortising and tenoning was practically similar to modern practice. In the early examples the tenons were often pegged for greater security; the joints of the framing, while quite close up on the face, would often be found slightly open on the back, showing that the shoulders of the tenon had been cut out of square to ensure the face joint being good. The narrow panels, small framing, and mouldings of the Elizabethan and Jacobean period were suitable for production by hand craftsmanship. A possible explanation of the small panels with regard to old oak work was the fact that oak logs were not cut through like mahogany, walnut, and other woods. Oak boards and planks were either obtained radiating from the centre, or the tree was cut in two and the boards cut from each half or billet, so that in no case were oak boards wider than half the diameter of the tree.

In the sixteenth and seventeenth centuries panelling was the universal means of finishing the walls, where



ALL PARTS STANDARDISED  
Fitted in the Principal Buildings  
Throughout Australia

Waygood-Otis (Aust.) Pty. Ltd.

4 Nithsdale Street, Sydney, New South Wales  
80 Queen's Bridge Street, Melbourne, Victoria



## MUNICIPAL COUNCIL OF SYDNEY

### COMPETITIVE DESIGNS

#### Workmen's Dwellings—Dowling Street.

THE MUNICIPAL COUNCIL OF SYDNEY invites Competitive Designs from Architects for a scheme or schemes for using to the best advantage three sites in DOWLING STREET, for the purpose of ERECTING WORKMEN'S DWELLINGS or FLATS. Intending competitors may receive the conditions and three site plans upon the payment to the City Council of one guinea, which sum will be refunded upon the conclusion of the competition if a design is submitted.

The following premiums are offered by the Council:—

**£200 for the scheme placed First.**

**£100 for that placed Second.**

**£50 for that placed Third.**

The Council does not bind itself to carry out any of the designs that may be selected; but in the event of the Council adopting the first premiated design, the Author of such design shall be appointed as consulting architect at a remuneration at the rate of two per cent. upon the cost of the actual work executed, less the premium of £200.

The conditions of competition, as published to competitors, will alone govern the competition.

Dated this thirtieth day of June, 1923.

THOMAS H. NESBITT,

Town Clerk of the City of Sydney.

Town Hall, Sydney.

## MUNICIPAL COUNCIL OF SYDNEY

### COMPETITIVE DESIGNS

#### Utilisation of Area known as Way's Terrace, Pyrmont, for Workmen's Dwellings.

THE MUNICIPAL COUNCIL OF SYDNEY invites Competitive Designs from Architects and others for a scheme for using to the best advantage the AREA KNOWN AS WAY'S TERRACE, PYRMONT, for the purpose of ERECTING WORKMEN'S DWELLINGS or FLATS. Intending competitors may receive the conditions and site plan upon payment to the City Council of one guinea, which sum will be refunded upon the conclusion of the competition if a design is submitted.

The following premiums are offered by the Council:—

**£200 for the scheme placed First.**

**£100 for that placed Second.**

**£50 for that placed Third.**

The Council does not bind itself to carry out any of the schemes that may be selected, but in the event of the Council adopting the first premiated scheme the Author of such scheme shall be appointed as consulting architect at a remuneration at the rate of two per cent. upon the cost of the actual work executed, less the premium of £200.

The conditions of competition, as published to competitors, will alone govern the competition.

Dated this thirtieth day of June, 1923.

THOMAS H. NESBITT,

Town Clerk of the City of Sydney.

Town Hall, Sydney.



## RIPOLIN PRE-EMINENT

The bulk of the Enamel used in painting the Commonwealth Bank of Australia was——

## RIPOLIN

—THE QUALITY NEVER VARIES—

For the big Job or the little.

It pays to use the best.

Specify RIPOLIN Paint and get it. Procurable from all Oil and Color Merchants, Ship Chandlers and Motor Accessory Houses.

REPRESENTATIVE FOR AUSTRALIA:

## L. A. CORMACK

4 UNDERWOOD ST. (off 35 Pitt St.) SYDNEY.

Telephone B 3284

### INTERSTATE AGENTS:

VICTORIA: Louis J. Eggleton, 379 Flinders St., Melbourne.  
Adelaide.

SOUTH AUSTRALIA: Clarkson Ltd., 124 Rundle St.,

QUEENSLAND: S. J. Squires & Co., Ltd., 171 Elizabeth St., Brisbane.

not covered with tapestry, and it was evident that in the sixteenth century there were a considerable number of skilled craftsmen in the joinery trade. The quaint designs executed in woodwork of the sixteenth century represent the first change over from Gothic to Classic. With no opportunity at that time of studying the classic models first hand, the craftsman created their own ideas in imitation of the contemporary work of the French and the Dutch craftsmen. The mansions built in the sixteenth century and early seventeenth century in the Elizabethan and Jacobean styles were numerous and important and of great size. The later renaissance might be said to have started with the work of Inigo Jones, whose visits to Italy and first-hand studies of the buildings there enabled him to introduce the more correct classical spirit into the work of the period. Woodwork and panelling were affected thereby; panelling was designed on a larger scale to suit the greater size of the buildings. Carving also was executed with greater skill, eventually becoming more important than the panelling itself. Owing to political circumstances the later renaissance started by Inigo Jones did not produce great results till the restoration period of Charles II., when the craze for building palatial mansions arose throughout the country. Inigo Jones, his contemporaries and immediate followers did not favour wood panelling so much as the use of stone and marble. It was to the great architect Christopher Wren, who followed in

the latter half of the seventeenth century, that was owed the position that wood panelling again filled. It was rare not to find examples of fine woodwork wherever Wren built. Another name equally familiar was that of Grinling Gibbons, whose period coincided almost exactly with that of Wren. Gibbons had made the panelling of the seventeenth and eighteenth centuries famous on account of his carving. He worked out his own designs, which were realistic to a degree. With such success was his carving used in connection with panelling that no important room was considered finished without examples of his work.

Charles II., William and Mary, and Queen Anne represent the period when Wren and Gibbons worked together. The panelling then produced started a phase that was followed throughout the eighteenth century. Its features were the large panels, bold mouldings, and cornices decorated with carving of the Gibbons' type. It was customary now to class this style of wood panelling as Georgian.

Elizabethan houses were built for comfort, and many for magnificence. The earliest form of decoration in panelling was by using the linenfold panel, and fifteenth century rooms, where all the panels were so treated, present a very busy and rich effect. An invariable characteristic of all panelling in Elizabethan and Jacobean period was the comparatively small size of the panels.—*The Builder*.

# Doulton's 3296 Flushing Valve

*In Nickel-plated Brass*



THE IDEAL BATHROOM FITTING  
FOR THE UP-TO-DATE FLAT

*Made in Australia*

OBTAINABLE FROM EVERY STORE  
STOCKING HIGH-CLASS  
SANITARY FITTINGS

**DOULTON & CO. LTD., Paisley and London**  
AUSTRALASIAN AGENCY: 193 CLARENCE STREET, SYDNEY



## ENGLISH ARCHITECTURE.

Before a recent meeting of the Manchester Society of Architects, Major H. C. Corlette read a paper on "English Architecture." He said that in studying the designing or "devysing" of old or modern buildings they looked for something that lived, and was creative, not for anything that was a revival of dead objects, a thing for dry criticism or dissection and dull catalogue. That must mean that whether architects or not, they should go to old buildings and seek to know how and why they were made by practical men. And that they should do, not to copy them, not to revive or restore the past, but to discover what their hidden secrets were. If they did that they would themselves be learning how to design, create, construct, new works for their present and future needs.

Architecture was a "something" in buildings when they considered them as a whole and not in their parts alone. It involved both the plan, or arrangement for accommodation, and the external appearance of any work, as a whole, a completed unit, together with the many parts that all combined and made that whole. It also involved, perhaps, more than anything else, the consideration of the materials used, the methods of construction employed and the climate of the country in which the building was found. Those were the elementary utilities out of which it was made and without which it could not exist. They were the rugged raw materials upon which mind must operate before building commenced and before architecture began to be released from its tomb of unhewn rocks; or before the product of the furnace and the kilns was clothed or shaped by another fire of energy controlled by mind and marshalled by imagination into things of form that were a new creation. If they approached old buildings in that way they could read thoughts in them. Whether they be large or small, of simple or complex form, they would find always something they could teach that would make them better equipped to do good work which a future generation might think was worthy of preservation.

In speaking of English architecture it was his desire to dwell more particularly on the work of that period which began in the early years of the sixteenth century and continued till about the time of the Civil War. They might call it, for convenience, the Elizabethan age. They had seen the confusion bred by Italian revivals, Greek revivals, Gothic revivals, and they were all probably agreed that no revival that would mean an effort to reproduce the works of the past had any interest for them to-day. But it might be that they could still discover fresh ideas in those old forms of thought that would help them and find new ways of solving questions which they were meeting every day. Much of the failure that had followed those revivals could be traced to false principles which had apparently governed those who advocated and took an active part in causing them.

One thing seemed to have been a common fault of procedure in all those different attempts to change or return to the course of tradition, or to return from a state of affairs in which all real sense of tradition had been lost. Men studied parts of buildings in detail and forgot to regard their forms as a completed

whole. And surely there could be little doubt that it was form in the mass and whole conception that called first for attention if they would know anything of architecture—past, present or future. Detail and decoration, fragments of buildings were not architecture. Other reasons helped to cause failure in those revivals. In one case an attempt to introduce into northern climates methods of building and design suitable in southern climes and developed to be used where there was much sun and little rain. Or the architectural thought of a Greek or a Latin race was imposed on a Gothic people.

The Gothic revival in England was a national revolt against a condition of things which found them without a national tradition. It was an effort to retrace their steps so far only as to find again, if they could, the ends of some lost threads of a native tradition, one that was a natural root in a national soil. It was the Gothic mind trying to find its lost bearings; a national desire for the recovery of a dissipated heritage. If they considered Gothic conceptions in architecture they would find that they possessed much the same sense of unity in design as the Greek builders expressed so well. In their essential nature both those traditional schools followed like principles. These principles showed that structure was the necessary element by which form could be, and should be, developed. And all changes of essential form were to be derived from structural needs. In fact, the plan, with the use for which a building was made, was the foundation out of which all real building tradition and architectural design arose. Climate allowed, or demanded, certain forms; materials dictated some methods. But those all met together and were combined in one. And it was the functional office, the structural nature, worked out as a building problem, in every subordinate part, that provided new ideas, importance and interest to the finished work.

That practical basis made all good architecture reasonable. It gave impetus to thought. It made the creative aspect of the art rest on common sense, while it was contriving to make each useful thing a piece of beauty in a beautiful total conception. Their creative effort must begin with things, not abstract ideas alone. So they came back to fact and found that necessity in building was the mother of invention in architecture. That was how the Greeks, within their limits, were architectural inventors. And it was by that same means, using new method, that the Gothic builders became such architectural creators.

There were few things so remarkable in the history of the arts as the apparent ease, the entire freedom, with which the Gothic builders turned from one kind of work to another. And when they moved from one problem to the next they did so with their characteristic energy of action and of thought. They approached their task without fear and attacked it without misgivings. For every new enterprise they were ready with fresh ideas. And in building they seldom, if ever, said the same thing twice over in the same way. They took things as they came, handled them and left them, and passed on to the next, never looking backward but always forward to see what might be coming. They lived architecturally, not in the past,

but in the present, doing what it demanded, not waiting, but moving on to meet the future.

They saw that in their parish churches and in their vast cathedrals. Differences in the materials available caused a change in details of structure or in colour. Differences in construction gave varieties of outline; differences in plan gave them variations of form and altered the disposition of their masses. Ornament was used where it might be appropriate. If they examined the old cottages of the period, the comparatively few that remained, or the houses, both large and small, of which there were many in all parts of England, it was still possible to see what Gothic mind, working through English tradition, could do when it was turned away from ecclesiastical to secular building during nearly two centuries. The plan of any one of them would in all cases be full of interest for many reasons. In some directions the economic or domestic restrictions or needs of planning had been the cause of altered forms in their buildings to-day. But if they retained now any of the fertility of resource and invention of their architectural ancestors those were only charges that brought with them an added interest and new opportunities for design to use. There could be little doubt that in England those powers that were required still remained. In many ways that had been proved to be true in the domestic architecture of recent years. The old cottages were such masterpieces that they saw no apparent effort. And yet it was that very absence of effort in their appearance that proved the skill that made them be so fine. They were the very

essence of fine art, tersely put, compressed, condensed, in every line of their rhythm, not saying too much nor yet too little, always speaking to the point and never wandering from the subject with which they had to deal. The mistakes they made in making them were nearly always over statement, prolixity of thought, confusion of idea, and ungrammatical expression. They allowed themselves to be led away from the aim and object they proposed, and they ended too often by producing something that was neither a respectable cottage nor a modest house.

—*The Builder.*

#### COMPETITIVE DESIGNS.

Attention is drawn to advertisements in this issue inviting competitive designs from architects for the erection of workmen's dwellings or flats. This work has been brought about by the re-construction of parts of Sydney, and embraces such a large area that the City Council decided to invite designs from architects.

Two designs are open for competition. Both are for the same class of work, but in different surroundings. The following premiums are offered in each case: £200 for the scheme placed first, £100 for that placed second and £50 for that placed third.

The conditions and site-plan may be obtained by competitors on payment of one guinea, which is refunded upon the conclusion of the competition if a design is submitted. Further information on the matter will be found in the advertisements.

## KANDOS PORTLAND CEMENT



**T**HE unrivalled advantages of Concrete over all other building material are enhanced by the use of Kandos Cement, which ensures Reliability, Homogeniety and Permanence.

**KANDOS CEMENT CO. LTD.**  
**33-39 Hunter Street - Sydney**

PHONES B 6741 and B 6742



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

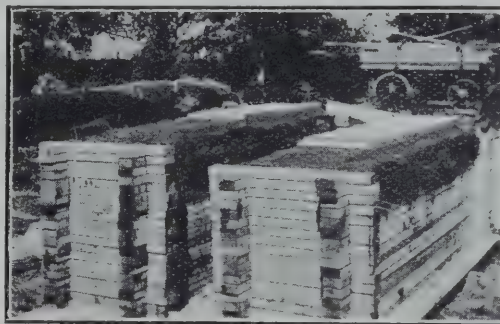
### CONCRETE HOME BUILDING.

In spite of the vast strides that have been made in the building of concrete homes, particularly in the United States, there have been many inherent defects in this form of building construction. Many of them have proved so serious that the universal application of concrete as a prime building material has been hitherto impossible. For large and costly buildings the success of concrete has been unquestionable; but for the cottage home and the suburban shop, where quality must be reconciled with low cost, the results in the past have not been an unqualified success in most cases, and more often than not the experiment has been an error of judgment on the builder's part.

To-day a modern "Stone Age" has arrived, as a most casual glance at the city's new buildings will reveal.

The past failures of concrete in small "jobs" have

we should place the excessive and almost disproportionate cost, and in this is involved the acquisition of expensive and complicated mechanical plant—a matter of common knowledge with the concrete worker. When we add to this the need for a technical knowledge and skill not possessed by the average builder



The Dampney stack method of making slabs.



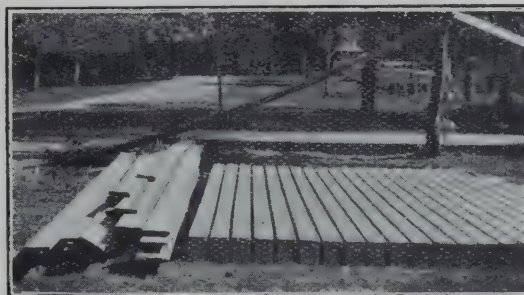
Studs erected and stayed, with wall plate in position.

been most carefully analysed, and the results of this research have proved most illuminating in that it has shown that the fault lay not in the chemical or physical composition of the prime material itself. No, it was not the concrete that was at fault, but it is to be debited to the *modus operandi* employed. The defects were in every case due to the clumsiness of the methods that were employed.

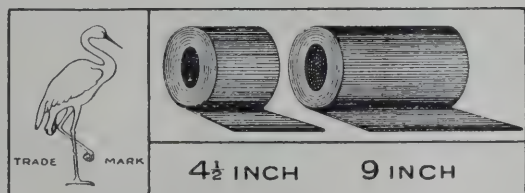
Paramount among the contributory causes of failure,

accustomed to working in brick and wood. The ordinary builders' finished product often left much to be desired in the method of waterproofing, for example, to mention only one point.

The inherent, and in the past insurmountable weaknesses of concrete construction, have been now haply



A batch of finished studs with boards removed.



### IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

### A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight.  
Superior, and costs less than cutting from Sheet Lead.  
No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.



minimised, and small homes can now be quickly built at prices within the reach of the wage earner, although our photograph shows some East Malvern (Vic.) homes. For the first time it may be said, in the history of concrete, it is possible to entrust ordinary competent workmen with nothing but the ordinary stock-in-trade of builders' tools, to apply concrete to ordinary dwell-

method builders can indulge in concrete practice almost universally without being harassed with high costs or an overshadowing of possible failure. The Dampney



Dampney Cottages in course of erection at East Malvern (Vic.)



Showing how Slabs are fastened to studs by means of Dampney Patent Fasteners.

ing-house construction, simply, cheaply, and well. This marked advance on the position of the past is made possible through the research and ingenuity of the Dampney Building Slabs Ltd., 92b Pitt Street, Sydney, who have evolved a complete patented system of concrete construction which has so simplified the process that success is assured with ordinary care. The disadvantages and defects of the older methods are no longer a bug-bear. As a result of the Dampney

system indeed costs much less than ordinary concrete or bricks. No expensive and cumbersome mechanical plant is now required, and skilled technicians to advise are unnecessary. Any builder who will take the trouble to master Dampney method, and this is not a matter of any difficulty, and will give it a fair trial, will soon be convinced that the system outrivals in cost and construction not only brick, but is the nearest yet in economy to weatherboards. Apart

## The "CISTELLA" CISTERN is SUPREME



*Specify the Cistern "Cistella"  
in all contracts and your clients'  
Cistern Troubles will be abol-  
ished for ever.*

1. It has an . . .  
*Incorrodible Container*
2. It has a . . .  
*Solid Brass Syphon*
3. It has a . . .  
*Silent Ball Cock*



*The first two features preclude all possibility of destruction by corrosion, while the third abolishes all gurgling or hissing.*





1. Light Battens checked into Studs.



2 Nailing "AdamO" Sheets.

## Architects Specify "AdamO"

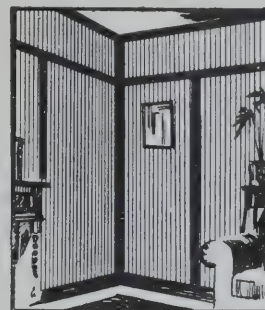
because it will not buckle, warp or crack, and readily lends itself to Artistic Treatment.

## Builders Use "AdamO"

because it is light and easy to erect. "AdamO" is sawn and nailed like wood.



3. Painting.



4. The Room Completed.

Booklet free on request to

**William Adams & Co. Ltd.**

Cr. King & Clarence Streets :: Sydney

With Branches in all Six States.

For most lasting results, use

# Mascot Zinc White

—a perfect flawless white of the greatest fineness, which may be used with any tint with admirable effect.

Mascot Zinc White is unaffected by the weather, being impervious even to salt water and sea air.

When a painter selects Mascot Zinc White—either for interior or exterior work—he knows his work will prove thoroughly satisfactory to all parties concerned.

Mascot Zinc White will not chalk, crack or rub off. It finishes with a hard, glossy, enamel like finish, and is absolutely non-poisonous.

*"Better Results with Mascot Zinc Products."*

Manufactured by

## MASCOT SMELTING WORKS

OLD BOTANY ROAD, MASCOT

Telephone: Mascot 117 & 340

Cable Address: "Cearinsons, Sydney"

Queensland Agents: A. W. BUTTON,  
Gough's Chambers, Albert St., Brisbane

Victorian Agents: A. KNOX & CO.,  
312 Flinders St., Melbourne

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

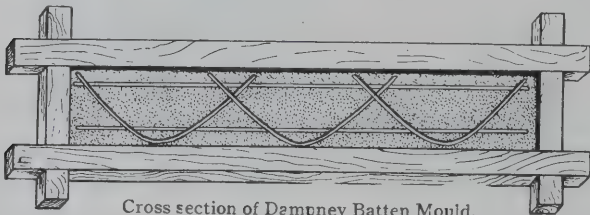
**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

from the question of cost the mere indestructibility of concrete gives it a superiority over wood that is obvious to everybody.

The proprietors of the Dampney process have published a series of illustrated manuals for the guidance of those interested in the various branches of the building industry. We have been favoured with a sight of the first of the series—"PRACTICAL HOMES." Another volume sets out the application of the system to the larger constructions required by city buildings, etc.



Cross section of Dampney Batten Mould.

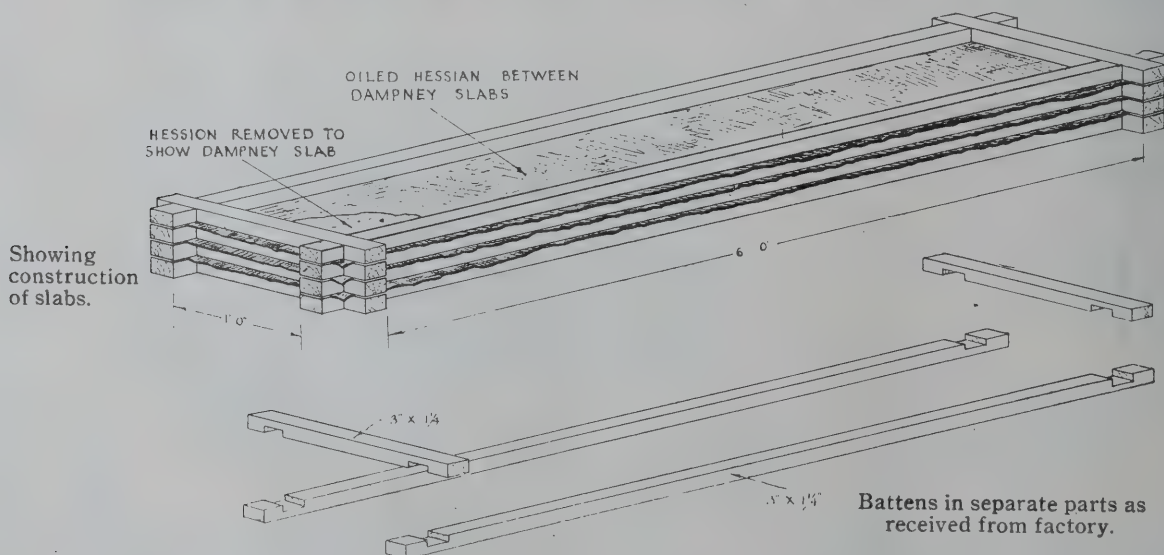
The national crisis being that of housing, we shall illustrate the constructional details of the Dampney system with this in view, on the principal of the "greatest benefit to the greatest number." While it will be apparent from our illustrative material that the

the school of personal experience. However, the builder who will take the trouble to master the system, and to back the knowledge thus gained with energy and good work, will have behind him the full resources of the Dampney Service Organisation now being established, and thus will possess a marked advantage over his competitors working in other materials.

## *Novelties of the Dampney System.*

In general, the Dampney system consists of a novel method of building by using reinforced concrete slabs and reinforced concrete studs. The distinguishing features may be summarised as follows:—

1. No forms required as in ordinary concrete construction. With the single exception of the patent Dampney Batten Moulds, which are shown in our pictures, special attention is directed to the cross-sectional view.
2. No machinery of any kind is necessary unless, of course, it is desired to use a mechanical mixer.
3. Much skilled labour is eliminated.
4. Less cement than is called for in ordinary concrete construction.
5. A genuine cavity wall may with this system be built in concrete.



Dampney system is exceedingly simple of technique, it must be appreciated that to thoroughly understand any practical art it is most necessary to have contact knowledge, and such knowledge can only be gained in

6. The time required for erection is minimised.
7. The cost is less than brick or ordinary concrete construction, and very little above that of weatherboard once the system is running smoothly.



# IN DAYS OF OLD

RECORDS WERE PRESERVED ON STONE

TO-DAY THEY ARE PRESERVED ON STEEL

## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.



## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.

WRITE FOR INFORMATION

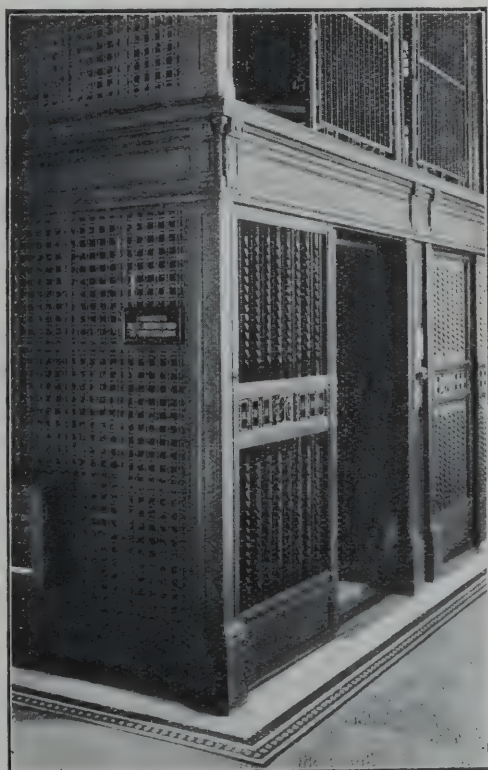
## STEEL PRODUCTS (Australasia) LIMITED

Corner of CASTLEREAGH and REDFERN STREETS, REDFERN, SYDNEY

Phone: REDFERN 819.

Cables: "ADEQUATE."

Postal: G.P.O. BOX 38, SYDNEY



## The Ornamental Steel Manufacturing Co. Ltd.

We are Craftsmen in the Manufacture of  
**Ornamental Steel Gates**  
**Entrance Doors and Railings**  
**Collapsible Gates**  
**Lift Enclosures**  
**Lift Cages**  
**Grills and Tenants' Boards**

**Metropolitan Mutual Life Building**  
Cr. HUNTER and BLIGH STS.    ::    Tel. B 5610

Above all, we can safely say that the system is logical, as it is founded on the "unit" plan which forms the basis of all economical mass production. Primarily the Dampney system is a method of wall construction in reinforced concrete, and can be used for the erection of either solid or cavity walls. In principle, we may say that it is analogous to weatherboard construction, concrete being substituted for wood thus:—

#### *Weatherboard Construction.*

Timber piers, timber bearers, timber studs, weatherboard (nailed to timber) studs, lining boards (nailed to studs), wooden wall plate.

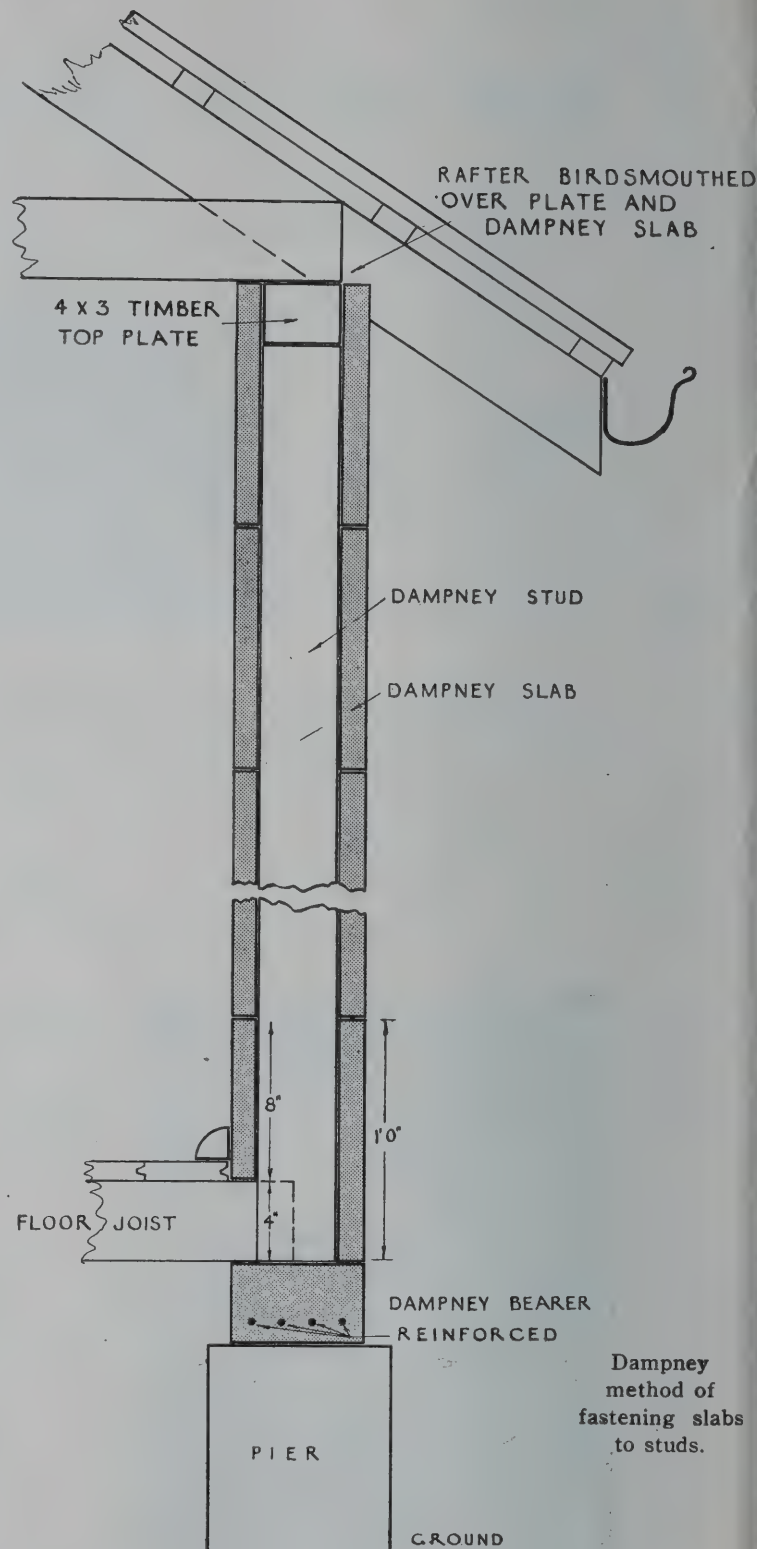
#### *Dampney Concrete.*

Concrete piers, reinforced concrete bearers, Dampney patent reinforcing stud, Dampney slabs attached to concrete studs with patent fastenings, Dampney slabs.



A Dampney cavity wall thus consists primarily of Dampney slabs fixed on each side of a Dampney stud. The stud itself is shown in the accompanying sketch. The reinforcement and the patent Dampney fastenings and the dowel pin are clearly indicated. The top pin going through wall-plate completes the structure of the stud. The moulds or forms for studs may be made of the flooring boards to be used in the building afterwards, so that no special plant is needed. The method of constructing the Dampney slab is simplicity itself. The only plant required being the batten moulds previously alluded to and a few accessory items, such as hessian cloth or similar suitable material, crude oil, reinforcing wires and "AXA" fastenings—only two of these latter being required per slab. The drawing will expound the details of assembly more directly than written description.

The slabs are best made by the Dampney stack method, which is quick and convenient. Virtually the method consists in stacking up a number of the Dampney batten moulds. Each slab, with its mould resting either on the first or previous slab made, as is shown in the attached photograph. In beginning a stack it is important to select a level piece of ground so that when the first form is laid down it bears everywhere, and is level always. It is generally a good plan to put some newspaper or hessian under the first form. The important point is that the slabs to be moulded will not sink below the bottom of form, as the stack is built up. It is an axiom that the better the slabs are cast the quicker they will be erected. In building up-stacks it is advisable to build up four in rotation. This allows each slab a little time



Dampney  
method of  
fastening slabs  
to studs.

# THE JOKER

Lives up to its name. Can't be beaten. Made in seven different Models, from a Chip Heater to a Hot Water Service Heater. Prices range from £5 to £40

BROOMFIELDS LTD. 152 SUSSEX STREET, SYDNEY. Tel. City 9780



Telephone B 2407

**LOUGH & SHAW**  
QUANTITY SURVEYORS

JOHN J. LOUGH  
H. E. SHAW

Atlas Buildings  
8 Spring Street

Phone B 3779

Phone Private. Hunter 405

**C. PEARSON SHAW**  
QUANTITY SURVEYOR

BOND STREET CHAMBERS,  
2 BOND STREET, SYDNEY

Late Valuer City Properties for Federal Taxation Department.

Telephone City B 3772

**JEFFRIES & DUNNINGHAM**  
QUANTITY SURVEYORS

Walter Jeffries  
J. C. Dunningham

N.Z. Insurance Buildings  
79 Pitt Street,  
Sydney

Tel. B 1906

**CHAS. A. HARDING & SON**  
QUANTITY SURVEYORS

Fifth Floor,  
Gibbs' Chambers,  
Martin Place

JOHN HARDING

Telephone: B 3565

**LONEON & HOCKING, Ms.Q.S.A.**  
QUANTITY SURVEYORS

16-20 Bridge St., Sydney.

MR. F. MORTON HOCKING

Estab. 1885

**J. ANDERSON WOOD & SONS**  
QUANTITY SURVEYORS

Pitts Building  
476 Collins Street  
MELBOURNE  
Phone, Central 5810

Union Bank-Chambers  
68½ Pitt Street  
SYDNEY  
Phone, B 3932

**STERLING**  
**EGG SHELL FLAT**  
**VARNISH**

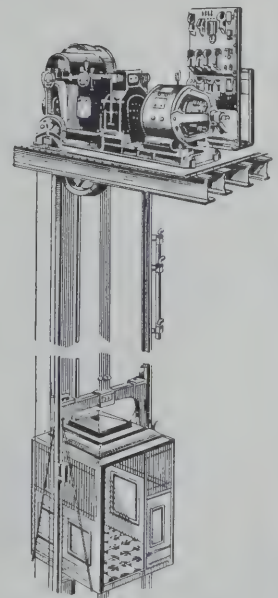
FOR FIRST-CLASS FINISH

**ART-A-FEC**  
**FLOOR VARNISH**  
FOR HARD, GOOD  
WEARING FINISH

**Sterling Varnish Co.**  
ALEXANDRIA

**Monarch**  
**Electric**  
**Lifts**

Safe, Reliable  
and Efficient



**Monarch Electric Motors Ltd.**  
2-4 RENWICK ST., REDFERN, N.S.W.  
TELEPHONE—REDFERN 453

CONTRACTORS TO N.S.W. GOVERNMENT

in which to set before another is built upon it. Each slab being well hand-pressed when made will then come out when cured of a uniform thickness, like a sheet of board. To adjust the length of the slabs needs only the addition of a division cross-piece. There is no need to allow for slab shrinkage in the Dampney process. All shrinkage has taken place by the time the slabs are ready to be built in. The slabs may be removed from their moulds in from 12 to 24 hours.

The method of fastening the slabs to the studs by means of the patent Dampney fasteners is shown in the picture.

Great stress is laid on the desirability of procuring the best concrete mixture, and the Dampney service gives sufficient directions for users whose experience in that direction may be somewhat limited. The instructions are clear and should result in the maximum of plasticity and homogeneity being obtained.

An excellent section of the Dampney instruction brochure is that which treats on verandah floors and their construction from the slabs just mentioned. All the details of house construction, both internal and external, are lucidly set forth.

Under quantities and costs it is stated that for a four-roomed cottage we require 30 tons aggregate and 5 tons cement. Slabs measuring 6ft. x 1ft. x 1¼in. should work out at about 10½d. The cost of a license for the use of the Dampney system for the above cottage is roughly £10. This is at the rate of one penny per square foot of slab used.

The sole organising agents for this State are John Danks & Son Pty., Ltd., who will supply the fullest

particulars on request, and to whom all licensing fees must be paid.

Commenting on the Dampney system, Mr. H. E. ROSS, the well-known architect, says: "The invention comes at an opportune time, when cheap houses of a durable character are essential, and when they are becoming more and more scarce. . . . The vital fact of this method of construction is the possibility of using a much larger proportion of unskilled labour, and thus make for activities otherwise impossible."

## AUSTRALIAN MADE.

### *Varnishes and Enamels.*

Amongst the many industries which have sprung up in Australia during the past few years is that of varnish and enamel making, and of the firms engaged in this industry that of William Docker, of Alexandria, Sydney, stands out with conspicuous prominence, the proud claim of this company being that it has "the largest, most complete, and most modern plant of its kind in the Southern Hemisphere."

The industry was originally founded in Australia by Mr. William Docker, himself, to sell the products of his English works. In 1901, Robt. Ingham Clark & Co., Ltd., of London, who claim to be one of the oldest varnish manufacturers in England and the largest varnish workers in the world, acquired the business and considerably enlarged its scope.

The new organisation continued to market the products of both Robt. Ingham Clark & Co., Ltd., known as "Britannia" brand varnishes, enamels, and specialties as well as those of William Docker, sold under the well-known "Sun" brand label.

### *The First Varnish Works.*

In 1907, a separate company was formed in London, under the name of Robt. Ingham Clark & Co. (Asia), Ltd., to take over and control the Australian business. The new company's first venture in the manufacture of varnishes in Australia was the establishment, in 1910, of a plant at Pyrmont for the making of varnish by "cold process," the operations at this works being confined to the making of spirit varnishes, French polish, knotting, "Strawdi," etc.

This initial undertaking proved so successful that it was decided in 1912 to manufacture all grades of oil varnish, in addition to the "cold process" varnishes.

### *Future Prospects.*

Two acres of land were acquired, and on June 7, 1913, the company's present works at Alexandria were formally opened. Since then the growth of business has been rapid and the buildings and equipment have been added to from time to time. In 1920, the governing director of the Australasian company, Mr. F. W. Fell Clark, who is also chairman of directors of the London company of Robt. Ingham Clark and Co., Ltd., visited Australia, and was so impressed with the prospects of the future that he decided that the works should be considerably extended. With this end in view, another additional two acres of land adjoining the present site were purchased. Additional buildings have been erected and a large plant established for the production of all grades of enamels, including special railway, automobile, and architectural enamels.



ALL PARTS STANDARDISED

Fitted in the Principal Buildings  
Throughout Australia

Waygood-Otis (Aust.) Pty. Ltd.

4 Nithsdale Street, Sydney, New South Wales  
80 Queen's Bridge Street, Melbourne, Victoria



*The Results of Research.*

From the world-wide undertakings of the parent company, the Australian company has the full benefit of all technical knowledge gained, and any improvements in the method of manufacture which may result from scientific research in the works of any associated company are immediately placed at the disposal of the management of each company in the circle. Further, the local company has at its works at Alexandria a well-equipped laboratory, under the direction of a highly-qualified chemist.

Although the firm of William Docker was absorbed by the firm of Robt. Ingham Clark & Co., Ltd., yet the products of the two companies are quite distinct, and still retain their own individuality, being sold under the two distinct brands—the "Sun" and the "Britannia" respectively.

*"Sun" Brand Products.*

The range of products manufactured by William Docker under the "Sun" brand, is a very extensive one, embracing, as it does, all classes of varnish for coach and carriage building, for painters and decorators' work, for boat and ship building; bath enamels specially prepared to resist the action of hot water; oil varnish stains for staining and varnishing in one operation; aluminium enamels; stove and bedstead enamels; kalsomine for wall and ceiling decorations; japanners and stoving varnishes; black and coloured varnishes; varnishes for cycles and motor cars; driers; stainers, etc. In the manufacture of all these, the firm claim that only the best materials, processes, and skill that money can command are used.

*"Britannia" Varnishes and Specialties.*

The lines manufactured by Messrs. Robt. Ingham Clark & Co., Ltd., under the "Britannia" brand, are also very numerous, and at the firm's Alexandria works tests under actual working conditions are made with every "Britannia" product. Amongst the many lines of varnishes and enamels, bearing this brand, special attention may be drawn to the Pearline enamels, which are specially prepared for railroad use, for automobiles, yachts, and launches, as well as for general decorative purposes. It is interesting to note that in connection with railroad work, Messrs. Robt. Ingham Clark produce materials for the complete process of enamelling rolling stock, from the primer and surfacer right up to the finishing coat of enamel. In this connection, the company is meeting with considerable success, holding at present the contract for the supply of enamels to the New South Wales Government Tramways for the current year, as well as having had their quotation for next financial year also accepted.

Pearline railroad enamel is also under test by the various railways of other States, and also by the Commonwealth Railway Department, and all reports received indicate that excellent results have been obtained up to the present.

Messrs. Robt. Ingham Clark & Co., also make a very high grade white enamel, known as Abbey white enamel, which is strongly recommended for all decorative purposes, and is very largely used by the principal shipping companies, both in England and in Australia.

**MUNICIPAL COUNCIL OF SYDNEY****COMPETITIVE DESIGNS****Workmen's Dwellings—Dowling Street.**

THE MUNICIPAL COUNCIL OF SYDNEY invites Competitive Designs from Architects for a scheme or schemes for using to the best advantage three sites in DOWLING STREET, for the purpose of ERECTING WORKMEN'S DWELLINGS or FLATS. Intending competitors may receive the conditions and three site plans upon the payment to the City Council of one guinea, which sum will be refunded upon the conclusion of the competition if a design is submitted.

The following premiums are offered by the Council:—

**£200 for the scheme placed First.**

**£100 for that placed Second.**

**£50 for that placed Third.**

The Council does not bind itself to carry out any of the designs that may be selected; but in the event of the Council adopting the first premiated design, the Author of such design shall be appointed as consulting architect at a remuneration at the rate of two per cent. upon the cost of the actual work executed, less the premium of £200.

The conditions of competition, as published to competitors, will alone govern the competition.

Dated this thirtieth day of June, 1923.

THOMAS H. NESBITT,

Town Clerk of the City of Sydney.

Town Hall, Sydney.

**MUNICIPAL COUNCIL OF SYDNEY****COMPETITIVE DESIGNS****Utilisation of Area known as Way's Terrace, Pyrmont, for Workmen's Dwellings.**

THE MUNICIPAL COUNCIL OF SYDNEY invites Competitive Designs from Architects and others for a scheme for using to the best advantage the AREA KNOWN AS WAY'S TERRACE, PYRMONT, for the purpose of ERECTING WORKMEN'S DWELLINGS or FLATS. Intending competitors may receive the conditions and site plan upon payment to the City Council of one guinea, which sum will be refunded upon the conclusion of the competition if a design is submitted.

The following premiums are offered by the Council:—

**£200 for the scheme placed First.**

**£100 for that placed Second.**

**£50 for that placed Third.**

The Council does not bind itself to carry out any of the schemes that may be selected, but in the event of the Council adopting the first premiated scheme the Author of such scheme shall be appointed as consulting architect at a remuneration at the rate of two per cent. upon the cost of the actual work executed, less the premium of £200.

The conditions of competition, as published to competitors, will alone govern the competition.

Dated this thirtieth day of June, 1923.

THOMAS H. NESBITT,

Town Clerk of the City of Sydney.

Town Hall, Sydney.

## AUSTRALIAN PAVILION.

*British Empire Exhibition.*

Cable advice has recently been received that the contract for roofing the Australian Pavilion at the British Empire Exhibition has been secured by the Ruberoid Co., Ltd., London. The large area of 17,000 yards of Ruberoid roofing will be required to execute this contract. Ruberoid products are well known to builders and architects in Australia.

## THE ART OF THE PAVIOR.

The importance of marble furnishings and terrazzoed floors to a well-appointed bank or other public institution is beyond any question, it adds just that indefinable touch of super-solidity and splendour, that convinces those who visit the edifice that they are in touch with munificence. The mind unconsciously senses opulence and prosperity. A visit to Hampton Court, Darlington, will convince anyone who may still be unimpressed with the seductive charm of artistic marble work, that even here in an apartment house, the impressive charm of a marble entrance portico and terrazzo floors can hold one captivated for a few moments. The work in Hampton Court is very beautiful, and upon inquiry the visitor would learn that it is from the master-hand of Messrs. Petrucco, Dreelin and Gamble. The first of these names would remind the querist of sunny Italy, with its Milan and the wonderful cathedral it contains, the very steps of which are imperishable works of art, whose entrances are decorated in magnificence unsurpassed, while the floors each carry the most magnificent examples of terrazzo work extant. In the scheme is embodied the coat of arms of the nation, every portion of the flag being worked in coloured marble.

The firm of Petrucco, Dreelin and Gamble specialise in just such work here in Sydney. Among their recent productions in our city we might mention the marble work in the Bank of Queensland, all of which was executed by them. For terrazzo and mosaic work a visit to the portico of Cathcart House, Castlereagh Street, where a splendid specimen of this firm's art is to be seen. For an example of their artistic ability in dado panelling, the Kogarah Victory Theatre furnishes designs and execution incomparable with those in similar grades of buildings. The steps and the floors of the Victory Theatre are the work of Messrs. Petrucco, Dreelin and Gamble, too.

A fine example in terrazzo art is that furnished to the Melba Theatre, Strathfield. In this theatre is a terrazzo moulding in single piece. The terrazzo work at the premises situated at the corner of Oxford and College Streets, City, are a further testimony to the pavior's art.

The firm can offer architects and contractors many special advantages, in addition to their up-to-date plant and machinery, as they have just recently greatly extended their workshops so that the increased demands of their constantly extending clientele can be handled with the minimum of delay. This firm have not lost sight of the very important fact that worry is often occasioned to the contractor who is forced to deal with

a multiplicity of small firms who act as his sub-contractors, delaying most exasperatingly the miscellany of small art items inseparable from the erection of buildings of any type. To prevent this unpleasant *contretemps*, Messrs. Petrucco, Dreeling and Gamble cover the whole field of marble and terrazzo art, and can turn out anything from a memorial tablet to a terrazzoed floor. Each department is in charge of an expert fully trained in artistic and commercial experience.

The firm's stocks of local and Italian coloured marbles is extensive, and almost every shade and grade of marble for terrazzo work is at once procurable from this wide range of stocks. The fact that all these separate departments are grouped under one roof is a great boon to the builder and contractor. Such a plan makes for the maximum of efficiency and causes the relations of all concerned to be such that good work can be turned out at the minimum of cost.

## DECORATIVE PAINTING.

In connection with the Royal Academy Winter Exhibition of Decorative Art, Mr. George Clausen, R.A., gave a lecture on "Decorative Painting."

Mr. Clausen said it was widely felt that painting should have its use and purpose, as in old times, that there should be a need for it, useful as well as beautiful. At present it was only needed for poster advertisements, some of which were indeed of great beauty. It was indeed a possibility that such of those fugitive things, good and bad, as survived for two or three hundred years would be treasured as the most authentic art of their time. But decorative painting was worth permanent place, and there was, among the younger artists, a strong desire to employ their talents in that way—a desire which had been greatly encouraged by the establishment of the British School at Rome. South Kensington had had a School of Decorative Painting for over 20 years, and he was glad to say that at the instance of their keeper, a serious beginning in that direction had been made in the R.A. Schools. It was to be hoped that that exhibition would awaken or stimulate the interest of their public bodies in that branch of art, for the necessary encouragement must come from them. With few exceptions their public buildings were dreary and needed adorning, and the talent was available.

The object of decorating a building should be not merely to adorn it, but to express something of its use, of its associations, or of the history of the people concerned with it. In that sense their old cathedrals were made living buildings, expressing not only the sacred story, but all sorts of amusing contemporary things. The old artists wanted to say something—to communicate—and in the older painters' work that communication was made in the plainest terms. It was little more than an outline touched here and there with colour; in fact, a description. All early art was primarily descriptive, like the drawings of children, and as artists gradually learnt to represent things, and painting developed, it passed—in Europe—from its early stages, through various degrees of realism, up to the point where it was almost possible



to give the complete illusion of reality (as in the paintings of Tiepolo). Was it a gain or a loss? It was difficult to say.

Let them consider the two opposing tendencies in art, both aiming at representation; the earlier giving, by recording facts, what was practically a description; the later, by recording appearances, aiming at illusion. Somewhere between these extremes was the ideal, and perhaps the central position which Raphael and Michelangelo held rested to some extent on the balance and restraint shown in their realism. Expression was not sacrificed to it.

There was little doubt that the aim of painting in all countries had been to give the effect of reality; and one must suppose the Eastern mind's conception of that was not the same as the Western's. In Europe, perhaps, up to the time of Masaccio, expression was still the main thing, and the early frescoes were pictures frankly painted on the wall. Giotto's at Padua, and Mantegna's and Angelico's at Rome, and Masaccio's at Florence, were like that. But later came the effort to make the picture part of the room in which it was placed, enlarging the room and bringing the spectator, as it were, into the company of the persons represented; that became a favourite device. The actual architecture of the room was skilfully continued into the painting. In the Sistine Chapel the basis of the ceiling design was a curious kind of architectural framing, a kind of thing which was later carried to its extreme limit by Tiepolo, and others, with a skill that was simply amazing. The actual architecture of the room was overpowered and practically abolished.

Such admirable work had been done and in so many different methods that it was impossible to dogmatise and say that one style of painting was decorative and another was not. It all depended on the conditions, the style of the building, and the position and lighting of the work. The Painted Hall at Greenwich, by Thornhill, a wonderful piece of work, was—to him (Mr. Clausen)—stuffy and oppressive; it would probably look better in the clear light of Italy. For his part, he thought the full range of colour should not be attempted in the country; there was not light enough. And his preference was for a simple treatment of flattish, well-adjusted tones, in a light and shade modified to suit the building. The decorations in the Royal Exchange were ineffective, largely, he thought, because of their complexity and heavy colour; and it should not be forgotten that a colour seen on a dimly-lighted wall was not the same thing as when seen in the full, clear light of a studio. The situation of a work should determine the weight of its colour, and the artist should aim to enlarge rather than to contract the boundaries of his room.

A decoration that was to harmonise with architecture, should have certain qualities that they associated with architecture; a formality in the planning of its groups, and a sense of stability in the figures; with that an ease and clearness of design, so that the figures should seem to be naturally employed and their actions understood. The treatment of light and shadow should be simple and as to colour, it should be clear and harmonious and related to the building. The question

## The MOTOR IN AUSTRALIA

Telephone—B 1219

---

From any Bookseller  
in the Commonwealth

Address  
Northcote Chambers  
16a Pitt Street, Sydney

Price **6** Pence

---

is not filled with dead matter lifted from the weeklies of Australia, Britain, and America. It is bright and original from cover to cover, well printed in type that anybody and everybody can read, and profusely illustrated. It is both a Magazine and a Trade Paper. Readers will find bright stories, paragraphs, pictures and fresh news.

Advertisers will find a large and growing audience of moneyspenders to interest in their commodities.

**Should be Read by Everybody**

SOLE PROPRIETORS, PRINTERS AND PUBLISHERS

THE MOTOR PRESS OF AUSTRALIA, LTD.

of the most suitable methods or mediums to be employed was a most important one. There were examples of different media in that exhibition—fresco, tempera, oil, and wax; but they could not judge from them the most important question—that of durability. Experience of true fresco in this country was not encouraging; the fresco paintings in the House of Parliament had, he believed, all deteriorated. Watts' fresco in Lincoln's Inn, also, was in bad condition; at one time, he was told, it was loose, like a powder, on the wall. There was a little trial panel by Sir Edward Poynter at the Tate Gallery, painted many years ago which seemed in perfect condition, but it had probably been kept under glass. So that fresco seemed undesirable; yet he was told by an Italian artist friend that he had executed works in fresco in the country here, which stood perfectly well, and he said that it was a question of the lime used, which should be made from marble, as in Italy, and not from chalk, as was the practice in England. Lord Leighton's decorations in the V. and A. Museum (in spirit fresco) were slowly powdering off the wall. He was afraid no medium could stand the foul air of their cities that had not a resisting basis of oil or wax. Something that would resist acids, and that could be washed, was necessary. He was doubtful if tempera—that most beautiful medium—would stand under these conditions; but he had no experience in that direction. The little experience he gained had been with a wax medium, diluted when necessary with turpentine, and he had found that to stand perfectly, and to stand washing.

Miss Lanchester claimed to have re-discovered the wax-water medium described by Cennini, and had a little panel in that exhibition which looked extremely well. Wax gave a dead surface, which was a necessity on a wall; otherwise ordinary oil colours were as permanent as anything one could wish; but the paint shone. He would give preference to wax; it was the oldest known medium—that and fresco. He believed there were examples of both at Knossos. Then they had the Egyptian paintings; and, as to mediæval work, he wondered what was the medium employed in the re-discovered panels in Westminster Abbey. It looked like wax, but he did not know. Another important question was the ground; should it be prepared on the wall itself, or should the picture be painted on canvas which was afterwards fixed to the wall; or on stretchers fixed to the wall, leaving an air-space behind? All those methods were practicable, and the last has some advantages, if the painting was not too large; if it was very large it ought to be fixed to the wall to keep an even surface. In that case it was not easily removable; the paintings by Puvis at Amiens were removed during the war, but he was told they were considerably damaged in the process, and required restoration.

To sum up, one might say that there was no technical difficulty now in the way of paintings being executed in buildings, which, given ordinary care, should last as long as the buildings themselves.

—The Builder

# KANDOS PORTLAND CEMENT



**A**S KANDOS CEMENT conforms to the Specification of every Australian Government, its use is a pledge of the highest satisfaction in all Concrete work.

The Kandos Brand is stocked by all Lime and Cement Merchants.

KANDOS CEMENT CO. LTD.  
33-39 Hunter Street - Sydney  
PHONES B 6741 and B 6742



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### The Work of the Landscape Engineer

*By Irving F. Morrow.*

Time was when a man might call himself an architect and conceive an architectural design as a pure abstraction. When a building was built, the rooms would assuredly be furnished, and on the outside certain things—steps, terraces, balustrades, planting—would eventually be brought into contact; but just what and how was a matter of relative, if not complete unimportance. Interiors were so many wall surfaces, and exteriors were so many elevations, and the sum of them all made a building.

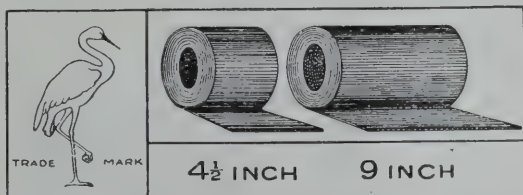
Those days, happily, are passing. Serious designers realise that the total effect is the important thing, and that the architectural structure is only one element of what goes into its making, a very necessary element, to be sure, but one which is, after all, not self-sufficient. The conception of a room without contents is anomalous; the conception of a building without surroundings is no less so. The interior decorator and the landscape architect or engineer, whether in the same person with the architect or as different individuals, must have a hand in the design if anything consistent and comprehensive is to be achieved.

Many people still conceive the landscape architect merely as a nurseryman who makes plants grow and uses their botanical names. It frequently happens, as a matter of fact, that the landscape architect is also engaged in the nursery business, just as the interior decorator often handles furniture and drapes. But it must be borne in mind that these allied business enterprises are in no sense of the word essential to the activities of these several people in their capacities of landscape architect and interior decorator respectively. The thing which differentiates the landscape architect from the mere nurseryman is the same thing which distinguishes the architect from the builder—the ability to design. He may or may not raise and deal in the

plants which he uses; but his specific function as landscape architect is to conceive the ways and means whereby a building and its surroundings are to be brought into harmony.

Obviously more things are here involved than making plants grow. It may be a question of grading, a phase of architectural composition which is often of the foremost importance, and yet, perhaps, one of the least understood and most frequently bungled. Garden (semi-architectural) features and furniture often enter into the design—steps, balustrades, urns, sculpture, pools, fountains, pergolas, and the like. The mere selection of plants is a field offering wide scope to the imagination; landscape designers are as prone as architects to credit the Renaissance with an impossible omniscience and finality in all which touches their work. These and other analogous considerations are entirely apart from the question of where plants are to be planted, or how they shall be made to thrive. It will thus be seen that the profession is intimately bound up with engineering, sculpture, and architecture proper, quite apart from the details of the nurseryman's trade.

Nor must it be imagined that the activity of the landscape artist is confined to architectural collaboration in setting off buildings. Much work in parks, public and private, involves no structure at all, sometimes not so much as a road or path. Here the task is the enhancement, or even the creation of landscape, pure and simple. This is by no means the least significant part of the work, nor the least difficult. There is in growing nature a generally appreciated tendency toward beauty, interest and reconciliation with damage. Things ordinarily grow beautifully or comprise aspects of beauty. The scars which man makes heal over in surprisingly few seasons. The ameliorative trend leads



### IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

### A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight.  
Superior, and costs less than cutting from Sheet Lead.  
No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.

uncritical people to suppose that all beauty resides in nature's own workings, and that all that is necessary to achieve the beautiful is to allow her to work out her own salvation without interference. It is true that for our materials we go to nature, but sensitive and creative minds are never content to leave them in the prodigal but haphazard state in which she gives them. The painter either conceives ideal landscapes, or alters those which he copies as much as may be needed to enforce the expression of his ideas. The landscape architect accomplishes the same end with nature herself instead of in pictures.

That such creative tasks present themselves is not appreciated by the layman. In fact, with his limited vision, he is prone to conceive all interference on the artist's part as falling into one category with box hedges clipped into balls, pyramids, roosters, and to resent it as a meddlesome intrusion. He is unaware that some of the most natural landscapes, some of those with which he is most familiar, are largely or entirely man-made. (Such, for example, is the case throughout the length of San Francisco's Golden Gate Park.) It will appear obvious, on reflection, that such landscape creation offers scope for imagination no less than does composing with the architect's range of building-materials; in fact, it is not too much to say that novel and unprecedented effects may be produced by a truly creative imagination. Vast possibilities, for

instance, lie open before the designer who studies the use of native Californian trees and shrubs in creative design.

Composition in landscape design, as in architecture proper, falls according to the circumstances involved and the temper of the designer into one or the other of two broad classes—the picturesque or the irregular and the formal. One reason, perhaps, that the public in California has failed to recognise the true value of the design factor of the landscape architect's service is that a great part of his work has been mistaken for natural landscape. Much of the work of the McRorie McLaren Company is of this naturalistic type. This is only as it should be. There is a definite accord between the informal character of our traditions, which seems to suggest an analagous spirit in deliberate landscape design. **Artificiality**, unless restricted in area or on a comparatively small scale, is inharmonious with the larger setting. Whatever may be in store for the future, we are still unprepared for our Versailles. The McRorie McLaren Company have embraced opportunities for a higher degree of formality at the Panama Pacific International Exposition of 1915. They have been particularly happy in effecting that slight touch of "civilising" required to bring the native landscape into touch with some of our larger country homes.—*The Architect and Engineer*.

## Berger's Annual Sales Convention

The annual sales convention, which is an established custom with the House of Berger, was officially opened by the Directors, on Monday, August, 6, when the presentation of prizes and bonuses was made. The convention was attended by some 55 delegates and associate delegates, representing every State in Australia and the Dominion of New Zealand.

The first day was devoted to a thorough explanation of the Berger system of testing raw materials and finished products. In the afternoon, addresses were given on the particular suitability of Berger products to the various trades.

On Tuesday, a complete and careful tour of the manufacturing departments composing the Berger works was made under the guidance of officers of the production department, and each of the manufacturing processes was carefully explained. In the afternoon, white lead demonstrations were made, which proved conclusively that Berger's lead is the equal of the imported article.

Wednesday was made up of working demonstrations by delegates, and a discussion of sale and advertising plans for 1923-24, after which, the Directors officially concluded the programme.

On Wednesday night the Berger Fellowship Club, which is an organisation composed of employees, enter-

tained the travellers with a special programme of music and comedy.

Thursday was set aside as an informal occasion, providing the delegates with an opportunity to discuss and settle any matters arising out of the convention, and also to attend to miscellaneous matters that required head office co-operation. At 8 p.m. on Thursday evening all delegates and associate delegates met at the Cavalier restaurant for the Convention banquet.

The annual convention of the selling organisation has done much to strengthen that service which is a most outstanding feature with the House of Berger.

### AUSTRALIAN PAVILION.

#### *British Empire Exhibition.*

Cable advice has recently been received that the contract for roofing the Australian Pavilion at the British Empire Exhibition has been secured by the Ruberoid Co., Ltd., London. The large area of 17,000 yards of Ruberoid roofing will be required to execute this contract. Ruberoid products are well known to builders and architects in Australia.





The Delegates at the Annual Sales Convention of the House of Berger.



# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

## The Truth About Mural Painting

*By James Guthrie.*

The subject of mural painting remains for all who are interested in beautiful buildings a fascinating, if puzzling one, and the recent ebullience of opinion in a contemporary must have left a good many with the impression that, what ever might be true about the state of this art, none of the writers could suggest a use for it. With the critics' views upon the deplorable plentifulness of talent we have frankly no patience; for when there is so little left in criticism as to set the most vital arts in obscurity and doubt we know that it suffers the same contagion which prevents the school instructor from seeing any hope for trained ability in mural painting except through patronage or State aid.

Although something has unquestionably been done by patronage in the past, it affords no secure or certain foothold for the arts to-day, and not only is that the case, but there have always been objections to it which have acted to the detriment of the naturally democratic spirit of art. We may not forget, even when contemplating the work of the great masters, how this nobility of vision and treatment makes its demand first upon the artist, and only afterwards upon the patron, whether prince or Pope, and our study when directed towards the resources of such a vocation in the hope of finding a new independence and a plausible sort of employment should not be diverted by illogical and unsound ideas, or whatever grounds are discovered will merely be those upon which no general healthy progress can be made.

A further contribution to the subject was that of one who had helped to organise the decoration of some walls as a means of providing relief work during the war. While the suggestion came nearer being practical because it stood more firmly upon an actual undertaking, there still clung about it the atmosphere of help and of official sanction which invariably acts oppressively, and cannot be regarded as anything but a somewhat desperate palliative. With all due allowance for the admirable work done by way of aiding those who were driven to seek help at that time, the employment of artists within their own province did not form the larger part of that benevolent activity. On the con-

trary, we might draw the conclusion from unfavourable conditions at any time that the tendency is to look for every sort of cure except the one which permits an artist the exercise of his own particular expression.

This same problem exists now in a hardly less acute form than before. We had no remedy in 1913 which can be applied now, or the unusual interest created in mural painting by the demand for memorials would have carried it into active operation and rendered these complaints and suggestions unnecessary.

The claims of the mural painter are obviously good in theory, however unequal his practice may be. If he should be led to accept and fall in with schemes of employment which are of the nature of charity, he merely postpones the practical organisation of his craft and launches himself upon a discouraging and fruitless uncertainty, leaving his fate in the hands of those who have a radically mistaken idea of how the art can be brought into common use and the artist given control of what is his own.

Either there is or is not a distinct and definite good got by the individual and the community from this ancient and beautiful art. No good can be got from it without some response, perhaps, but the response to any given thing is not induced by its privacy and unfamiliarity. Hidden away in the studios and schools and shows are many pleasant and exciting schemes which find no general application, mainly because the spirit of open adventure on the part of artists is wanting. They have not realised that they exist in a place apart, and that they have never created the necessary machinery by which their work might be pushed into direct contact with the people without being attached to the big shop, the industrial exhibition, or the rich, unlikely patron, who all represent conceptions of art more or less antagonistic to progress on natural lines.

Something of what this antagonism is has been slowly borne in upon art workers of all kinds within the last few years. It has taken a clear shape, and has, by implication, shown what little remains if the arts are dependent upon the relationship of design to indus-



# IN DAYS OF OLD

RECORDS WERE PRESERVED ON STONE

TO-DAY THEY ARE PRESERVED ON STEEL

## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.



## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.

WRITE FOR INFORMATION

## STEEL PRODUCTS (Australasia) LIMITED

Corner of CASTLEREAGH and REDFERN STREETS, REDFERN, SYDNEY

Phone: REDFERN 819.

Cables: "ADEQUATE."

Postal: G.P.O. Box 38, SYDNEY



## The Ornamental Steel Manufacturing Co. Ltd.

We are Craftsmen in the Manufacture of  
Ornamental Steel Gates  
Entrance Doors and Railings  
Collapsible Gates  
Lift Enclosures  
Lift Cages  
Grills and Tenants' Boards

## Metropolitan Mutual Life Building

Cr. HUNTER and BLIGH STS.

: : Tel. B 5610

trialism when they have no volition of their own for the proper adjustment of that relationship.

The action of the Society of Arts, in putting forward industrial design should, but I think it does not, coincide with action on the part of any purely artistic body. Its operation appears to be in conjunction with the schools, which, in the absence of any other authority, undertake more and more, the direction of employment, an enterprise which has several serious objections for those who are grown beyond the jurisdiction of art masters and professors. But I say this less because of possible abuses than from a firm belief that the matter in question is too serious and far-reaching to be handled indirectly in such a way by these men.

These arrangements all suffer the same defect. They are substitutes for something better, and perhaps would not exist were it not for the lack of a wholesale grasp of the whole subject by those who profess or are in a position to lead and guide. But by means of such substitution, the natural claims of design in every department are disposed and put forth by those whose knowledge and experience are not primarily artistic, those who prefer the pliability of the student to any greater competence or resistance.

Mural painting might well be the subject of experiment on actual walls, and for particular purposes. Art masters press the students of their systems upon public buildings, but are not noteworthy, on the whole, for enthusiasm where their own school walls are concerned, which is not a good sign. The larger schools have enormous bare areas of wall space, halls and

stair-cases and ceilings that cry aloud to be used. The expansion possible for the student in his own home and the homes of his friends is almost entirely neglected. While he might be making his art familiar, bearing down opposition both for himself and for others, he is pursuing his study in a perfectly artificial way, waiting for the patron to come and lift him straightway into fame and fortune. That is to say, the average art student who learns how mural painting should be done, is in the condition of a man who closes all the doors between himself and the ordinary and proper practice of his work, and supplicates unknown and probably non-existent men for a share in the great opportunities which he himself will be the first to admit were beyond his capacity.

Everywhere it is the same. The studio is full of interesting sketches for "proposed" decorations. The school studies give the illusion of unbounded talent. Drawing becomes like an acquired taste, something for learned curators to attest, and rank with the great, to the confusion of any but the stoutest character and gifts. Art, like a mushroom, responds to the intensive heat of modern training, but it needs more manful trial than by these theoretical unpractical methods, or it will knock at the door and still be refused admission, and will not have gained any access to the people even by being installed in galleries and praised in newspapers. The painter, a workman keenly aware that he has a gift of beauty to confer, ready at all times to demonstrate it with form and colour and a sense of fitness, has already passed through most of the barriers. His



## Quality Tells

In practically every phase of life  
this is apparent and recognised.

RIPOLIN is manufactured under a secret process from the very highest grades of raw materials obtainable—the quality never varies.

WHITE AND 52 ARTISTIC SHADES PROCURABLE

For Painting Front Doors, Window Sashes, Front Gates, Guttering, Downpipes—in fact on all

exposed material it is less costly than paint and varnish, and will last much longer. On inside work Ripolin is practically everlasting. RIPOLIN can be applied over White Lead, White Zinc, &c., but for most perfect results Ripolin Special Undercoating is best.

**L. A. CORMACK, Factory Representative, 4 Underwood St., Sydney**  
(off 35 Pitt Street)

Interstate Agents—MELBOURNE: Louis J. Egerton, 379 Flinders Street; ADELAIDE: Clarkson Limited, 124 Rundle Street. BRISBANE: S. J. Squires & Co. Ltd., 171 Elizabeth Street.





Astor Flats—Indented Bars used throughout.

# *SPECIFY* **INDENTED STEEL BARS**

*For All*  
**REINFORCED CONCRETE WORK**

The **PATENT INDENTED STEEL BAR** is  
rolled in **AUSTRALIA FOR AUSTRALIAN**  
**CONSTRUCTIONS.**

*Let US Quote for Your Next Job*

Sole Agents—

**William Adams & Company Limited**

**175 Clarence Street, Sydney**

**Melbourne, Brisbane, Perth, Adelaide, Launceston**

# *Mascot Zinc White*

*The Painter's "First Assistant"*

**I**N the preparation for your work do not overlook the economy and reliability of Mascot Zinc White.

It will enable you to do a job of the finest quality without undue expense, for it has great density, exceptional covering capacity and extremely long life.

Mascot Zinc White mixes perfectly with any color, giving a smooth effect of great beauty.

It does not crack, chalk or rub off, but lastingly resists all weather conditions.

*"Better Results with Mascot Zinc Products."*

Manufactured by..

**MASCOT SMELTING WORKS**

**OLD BOTANY ROAD, MASCOT**

Telephone: Mascot 117 & 340

Cable Address: "Gearinsons, Sydney"

Queensland Agents: **A. W. BUTTON,**  
Gough's Chambers, Albert St., Brisbane

Victorian Agents: **A. KNOX & CO,**  
312 Flinders St., Melbourne

genius, should his talent be so great, will suffer no loss by rich expression. His material will spring up around him, more often in some hint picked up in a half-built house, or under stress of the artistic poverty displayed in the arrangements of the walls of art exhibitions. A copy of *The Builder* will suggest more to a workmanlike mind than a shelf of art journals. There are asbestos sheets and patent boards which would have been welcomed by the great painters of the past. Smaller wall sections can be designed partly in the workshop and completed *in situ*. Improved colours, ready methods, lurk everywhere to attract beauty and draw it into daily service. It need not be any more true than we like that beauty is ushered in with an apology, nor do questions of expense set up so formidable a barrier as indefinitely to put off the invasion of colour into church and hall and home.

Builders and architects still remain more aloof from this matter than they might be. Perhaps they argue that there is nothing to go upon; but the fact remains that a great deal of decoration is done, and is done largely by those who have no special aptitude in ready-made styles and poor colour. The adventurous house-painter here and there is sporting in his recognition of the modern touch; he is unfamiliar, however, with the artistic resources of his material, and till he undergoes explicit training, can never be more, though as an ally he could scarcely be improved upon.

Another of the drawbacks under which the mural painter labours is his fancy for permanence. No doubt lasting work is desirable when it is worth keeping—but we have to recall the plain fact that most of what is put upon walls and canvases is not worth keeping, and that if the test of our walls is to be their capacity to remain for a thousand years, then, indeed, we are going

in beyond our depth—or rather refraining because of a mistaken standard or worth. Permanence of material no artist is likely to neglect; that is a different thing.

The disaster which we have to consider is the complete stoppage of practice because he ranges himself alongside Michelangelo and Tintoretto, makes a fetish of Cennino Cennini, and, as a result, has no walls to paint. This is putting the cart before the horse; for if we reverse the order of things, and decide that it is worth while decorating dining-rooms, stair-cases and halls, and altering and improving schemes planned to last for a few years, we arrive at something more advantageous in every respect. Permanence of colour can be made good where a bad design cannot. The problem of what shall be acceptable to live with is barely touched, and, in fact, cannot be decided at all in schools of art. Mural painting is essentially intimate and local; it is the father and mother of other sorts of painting. A room, however small, whatever its use, is awakened into life by colour, and given a character which is otherwise lacking. Green and gold may give place to blue and rose next year, or in five or ten years' time. Nobody wishes to live, or even meet, in a place which jostles the eye with Cockney versions of old legends, or with things done to please academic taste. The picture may only be the rallying-point of a simple scheme, the one small space in which the artist has leave to enjoy himself. But it is this capacity to sustain a task which lies near his hand, to serve an ordinary purpose that matters more than any misguided ambition. This will open the door, will decide the terms, and free the artist from a thousand useless go-betweenisms, which, as has been seen, come with no faith and no practical ideas.—*The Builder*.

## Planning for Occupational Therapy

With Special Reference to Curative Workshops and Recreation in Hospitals and Sanatoria.

(By T. B. Kidner, *Institutional Secretary, National Tuberculosis Association.*)

As new ideas develop new methods, changed demands on the architect are characteristic of all types of buildings, but in no field of planning is this more marked than in hospital design. Ten years ago, outside of hospitals for mental and nervous diseases, and some half-dozen sanatoria for tuberculosis, institutions for the care and treatment of the sick made no provision for a form of treatment which has assumed exceeding importance in the past three or four years, namely, occupational therapy. To-day, the relief and cure of suffering by means of an appropriate occupation forms a part of the treatment in almost all kinds of institutions devoted to the care of sick and disabled persons.

As far as hospitals for mental and nervous diseases are concerned, this form of treatment has been applied for many years, and is well recognised as a necessary part of the regimen of such institutions. In point of fact, one of the leading psychiatrists of the country, Dr. T. W. Salmon, who had charge of neuro-psychiatric work in the American Expeditionary Force, has said

that: "Occupational therapy will some day rank with anæsthetics in taking the suffering out of sickness, and with antitoxins in shortening its duration. The greater part of the distress in chronic diseases is mental, and occupational therapy is, thus far, our only means of dealing with this factor."

The general adoption of modern methods of rehabilitation in the world war hospitals, particularly in the United States and Canada, has led to an enormous development of the work, and from every type of hospital in the country to-day demands are coming in for trained workers and for advice on equipment and buildings.

It is believed that a statement of the scope of occupational therapy and of the methods of its application will be of service to architects who may be called upon, in hospital planning, to provide for this new form of treatment.

Side by side with the increased use made of occupations in the treatment of the sick has come an increased



recognition of the value, and, indeed, the absolute necessity, of making adequate provision for the recreation and amusement of the patients. This is, of course, particularly true in the case of hospitals for mental and nervous diseases. It is true, also, of tuberculosis sanatoria, where the treatment is long and tedious in its nature, and the good morale and contentment of the patients are of great importance.

Occupational therapy has been defined as follows:—

“Any activity, mental or physical, definitely prescribed and guided for the distinct purpose of contributing to and hastening the recovery from disease or injury.”

For present purposes, occupational therapy may be grouped broadly under two heads: (a) Ward Occupations; (b) Curative Workshops.

Ward occupations include work which is given to patients in bed, often termed “Bedside work.” The term, “Ward occupations” also includes work given in a hospital solarium, or on a “cure-porch,” in a tuberculosis sanatorium, to patients who are sufficiently recovered to leave their beds for a shorter or a longer period daily. Very little special equipment is necessary in this stage, and the only provision the architect need make is a small room for the storage of the equipment and the material. A room ten by twelve feet, fitted with open shelves on two sides, should be sufficient to care for from forty to fifty patients in a general hospital, or in the infirmary unit of a tuberculosis sanatorium.

When a patient has progressed towards recovery so that he is able to take exercise (the so-called “ambu-

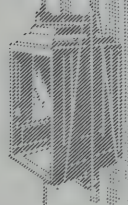
lant” stage in tuberculosis), a wide field of work opens in which the hospital architect is directly interested.

Curative occupations for convalescent patients may consist of work given solely because of its restorative value, mental, or physical, or both, or it may be given for the dual purpose of assisting in the patient's restoration to health and of helping him to earn his living after he is discharged from the hospital.

This latter aspect of curative work was, of course, the principal motive in the rehabilitation work in the war hospitals. The world war caused a great change in the attitude of the various countries concerned towards the problem of the disabled soldier. In previous wars, a nation usually considered that by the provision of pensions and medals, and, in some cases, “Old Soldiers' Homes,” the duty of the nation towards those disabled in its wars had been fulfilled. In the World War, however, for the first time the nations realised that pensions and medals were not sufficient, and that it was the duty of the nation to supplement these by providing opportunities for its war-disabled men to become once more self-supporting, and, therefore, self-respecting and contented citizens. A realisation of this led to the provision of vocational training courses in which a soldier permanently disabled by wounds or disease could be trained in some occupation appropriate to his condition, and thereby be enabled to engage efficiently in some gainful occupation, in spite of the handicap of his disability. The resulting programme



## WAYGOOD-OTIS LIFTS



ALL PARTS STANDARDISED

Fitted in the Principal Buildings  
Throughout Australia

Waygood-Otis (Aust.) Pty. Ltd.

4 Nithsdale Street, Sydney, New South Wales  
80 Queen's Bridge Street, Melbourne, Victoria  
Tyrrell Buildings, Telford Street, Newcastle

## STERLING EGG SHELL FLAT VARNISH

FOR FIRST-CLASS FINISH

## ART-A-FEC FLOOR VARNISH

FOR HARD, GOOD  
WEARING FINISH

Sterling Varnish Co.  
ALEXANDRIA

of vocational rehabilitation for disabled soldiers and sailors was followed in the United States by a similar programme for persons disabled in industry.

In June, 1920, Congress passed an Act, known as the "Industrial Rehabilitation Act," the object of which is, "the promotion of vocational rehabilitation for persons disabled in industry, or otherwise, and their return to civil employment."

The importance of this measure may be appreciated when it is realised that it has been estimated that the number of persons disabled annually in the United States by industrial and other accidents is equal to the number of those who would be disabled from an army of 1,500,000 men in active service in the field. If to that number be added the number of those disabled by industrial illness, it is said that the total would be equal to the number disabled from an army of 2,000,000 men in active service.

This Act involves co-operation between the Federal Government and the States on the "dollar for dollar" basis; that is to say, for each dollar contributed by the Federal Government, a dollar must be contributed from the State funds. The offer of co-operation and assistance from the Federal Government brought an immediate response from some States which had already realised the need of rehabilitation. Other States followed, and, in all, some thirty-eight States, to date, have joined with the Federal Government in this important scheme, and are actually at work.

The effect of this upon hospital practice has already been felt. It has become an axiom that the sooner the vocational rehabilitation of a disabled person can be commenced, the more likely is it to succeed. The application of this beneficent Act is, therefore, resulting in the provision of facilities for occupational therapy and pre-vocational training in many hospitals where such work would otherwise probably not have been introduced for many years to come.

For physical disabilities, the curative workshop forms the principal method of applying the work cure. Hospital architects have long been familiar with the many special machines for the correction of physical disabilities, and have provided space for them in hospital planning. The curative workshop is, however, largely superseding mechanical apparatus, the use of which has practically no psychic value, and can only have an indirect and problematical subsequent vocational value.

Side by side with the curative workshop, which will be described later, provision is also made for training in certain academic subjects. This is especially true where the work provided because of its therapeutic value has also a direct bearing upon the patient's subsequent occupation. Broadly speaking, therefore, the occupational therapy department of a hospital, if properly organised, forms, in effect, a small vocational high school.

In considering the accommodation necessary, it should be noted that the classroom subjects will vary scarcely at all in different parts of the country. Certain standard subjects have also been generally adopted in shopwork, but local industrial conditions will probably have some influence upon the hospital shopwork in

different parts of the country. In some few places, it has been found possible to supplement shopwork by gardening and agricultural work, where climatic and other conditions permit. Where this is done, the demand for space indoors is, of course, greatly reduced. This is particularly true of many of the larger hospitals for the insane throughout the country, where an enormous amount of space would be required for patients' occupations, were it not for the fact that a large proportion of them are usefully and happily employed in work on the land.

It must be confessed that at present it is not possible to lay down very definite standards for the number of rooms and the amount of space required for occupational therapy work for a given number of patients. As far as tuberculosis hospitals are concerned, however, the writer made an attempt to do this in a memorandum to the United States Public Health Service, written in his capacity of Consultant on Sanatorium Planning to the Service. The following is an extract from the memorandum, which has been published as Reprint No. 667, United States Public Health Reports:—

The exact number of rooms to be planned will depend upon the size of the hospital, but provision should be made so that at least 75 per cent. of the ambulant patients can be accommodated, either in class-rooms, or shops, or at one time. It may be considered that this is high, but it must be remembered that the hours of "exercise" are limited; also that semi-ambulant patients nearing the stage of full exercise, are often directed by the physician to take periods in the classes or shops.


#### Suggestions for rooms.—Administration.

- (a) An office for the chief aide (therapist), say, 10 by 12 feet.
- (b) A store-room for materials, say, 10 by 12 feet.
- (c) A room for finishing (Assembling, varnishing, dyeing, enamelling, etc.), say, 12 by 18 feet.
- (d) An office for the vocational director, say 10 by 12 feet.
- (e) A store-room for stationery, books, and other supplies for academic classes, say, 6 by 12 feet.
- (f) A store-room for shopwork supplies, say, 10 by 25 feet.
- (g) Toilet rooms for male and female instructors.
- (h) Toilet rooms for students.

*Classrooms.*—Because of the individual nature of the instruction, classes should not exceed 16 students. The room should be lighted on one of the long sides, with windows of the side-pivoted type, preferably, the light to come from the left of the students. The radiation should be installed below the windows, and a foul-air vent arranged either in the ceiling or high up in the opposite wall. Standard blackboards of slate (or, in a temporary construction, of hylopeatite), should be installed on the wall at the rear of the teacher's desk and on the wall facing the window. A sink for washing blue-prints should be installed in the drafting room; size, about 18 by 30 inches.





There's a   
Fitting for Each  
and Every Room

## Electricity in the Home means Better Living with Less Effort

That is probably the goal we are all striving for—"better living" with less effort." Particularly is this true when applied to a home.

Better living means more comforts, more time for recreation—recreation for both mind and body. Less effort means less unnecessary work, work which could be done more efficiently by electricity,

Let electricity do the work. Enjoy more leisure hours.

The modern home provides plenty of places for electric-lighting fixtures; ample provision for the convenient use of electric labour-saving appliances.

Convenience outlets (places to attach lamps, table appliances, vacuum cleaners, irons, etc.) cost very little in comparison with the comfort and satisfaction they afford.

To do it electrically means more recreation, less fatigue.



## The Australian General Electric Co. Limited

"Mazda House," c/r Wentworth Avenue and Goulburn Sts., Sydney. Phone City 3510. Box 2517 G.P.O.  
"Mazda House," c/r Queen and Little Collins Sts., Melbourne. Phone Central 2646. Box 538 G.P.O.

BRISBANE—The Engineering Supply Co. of Australia Ltd. (E.S.C.A.), c/r Edward and Charlotte Streets.

TASMANIA—Oliver & Oliver, Hobart and Launceston.

ADELAIDE, S.A.—Charles Atkins & Co. Ltd., 88-90 Currie Street.

PERTH, W.A.—Charles Atkins & Co. (W.A.) Ltd., "Mazda House," 894 Hay Street.

Generally, four branches of study should be provided for:—

- (a) Academic.
- (b) Typewriting.
- (c) General commercial.
- (d) Mechanical drafting.

Provided that properly deadened floors are installed, the classroom may be in the upper storey of the building in which the shops form the ground floor.

*Shops and laboratories.*—While suggestions will be made as to sizes of units, it is well to arrange that the interior partitions be of light construction, and installed in such a manner that they may easily be moved should changes be necessary.

Factory-type windows are desirable, and they should extend to the ceiling. At least 50 per cent. of the sashes should be capable of being opened, preferably horizontally, on side pivots. Light on two adjacent sides of the room is desirable, and the window-glass area should be not less than one-fourth the area of the floor-space.

Each unit should accommodate from 10 to 12 students, and should provide not less than 150 square feet of floor-space for each student. The floors should be of a heavy groove-and-tongue batten or wood-block. Ceiling should be not less than 13 feet high.

The following are typical of the subjects often given in shops in a sanatorium for tuberculous ex-service men:—

- (a) Watchmaking, jewelley, engraving, etc.
- (b) Tailoring

(c) Shoemaking (provide for a 5 horse-power electric motor).

(d) Commercial art.

(e) General technical shop or laboratory, used for arts and crafts work of more advanced type than is possible in bedside and ward occupations; also for "try-out" work in cases where the indications as to a student's capacity, inclinations, etc., are not clear. (Provide for a 10 horse-power electric motor).

In sanatoria in which gardening, agriculture, and other out-door work form a part of the active features of the vocational classes, it is probable that shoemaking or tailoring or both would be omitted. Instead, a laboratory for science related to the out-door studies would probably be installed.

In each workshop, water should be laid on, and a kitchen or other working sink installed.

It is believed that the several suggestions outlined in this article will prove of interest to architects and others interested in hospital planning. Undoubtedly, more and more attention will be paid to occupational therapy and pre-vocational training in hospitals. No subject connected with the care and treatment of the sick is receiving more attention in this and other countries than that of the after-care of hospital patients. This is bound up with hospital care, particularly with the field dealt with in this article, and it is certain that hospital planners must be ready to meet the demands which will be made upon them in this connection.—*The American Architect, and the Architectural Review.*

# KANDOS PORTLAND CEMENT



**T**HE Complete Uniform Reliability of every bag of Kandos Cement has met with gratifying Public Recognition. Hence the remarkable growth of the Kandos Cement Industry.

**SPECIFY KANDOS CEMENT.**

The Kandos Brand is stocked by all leading Lime and Cement Merchants.

**KANDOS CEMENT CO. LTD.**  
33-39 Hunter Street - Sydney  
PHONES B 6741 and B 6742



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### SOURCES OF INSPIRATION FOR MODERN ARCHITECTURE.

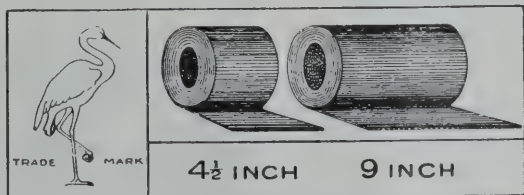
In the course of a lecture to the members of the Watford Literary Society recently, Prof. A. E. Richardson, F.R.I.B.A., said first they had to consider the broad foundation upon which modern architectural design, especially that of a monumental character, rested; and secondly, to study the international relationship of that special branch of building. They could afford to take a very wide view of the term "modern architecture," which would not represent the architecture of to-day or that of to-morrow. On the contrary, it was associated with the highest achievement of the past three centuries. In that wide view of the architecture of Europe and America, that was to say of those works that followed a definite academic system, could be seen the logical expansion of the Italian Renaissance, which had its birth in Italy, and from which flowed the warm stream that thawed the frigidity of the northern countries of Europe.

Architecture was a story of nations. It was the noblest form of literature and the most truthful. If they would be strong, they must ally themselves with the past, for, paradoxical as it might seem in that procedure, lay the only way to originality. Architecture, apart from technical and local considerations, if it were to rise above mediocrity, depended for its life upon precedent. To-day they were beginning to realise the meaning of the eighteenth century, which witnessed throughout the world a series of changes, scarcely apparent to those who acted at the time, but to our eyes of an importance equal to the great changes that took place in Europe on the eve of the Reformation. The Renaissance was bound to have its logical expansion and sequence; that that expansion coincided with the modern spirit was a coincidence and nothing more. The Renaissance, productive as it was of a rich crop, could not be limited to a single harvest. Hence it was the eighteenth century witnessed the fuller expansion of the idyllic movement, and that the nineteenth century had seen the further expansion and extension of the theories to America.

In recent years individuality had given place to empirical analysis; local traditions and customs had combined to produce a complexity of ideas which had to some extent tended to obscure the finer vision of designers. From the earliest times to the present day, building has conformed, perhaps subconsciously, to certain abstract rules of composition which were common to all branches of art. For the purpose of a wide view of what constitutes modern tradition, due account had been given to the accepted use of materials and to the fact that scholarship had succeeded craftsmanship and individual effort. Conditions had gradually become so complex that the humane qualities of building as building had been in danger of being entirely neglected. A word of explanation was necessary regarding Classicism, which, broadly speaking, implied the study of classical prototypes and monuments, both ancient and modern.

A view of modern architecture was essential to the designer of to-day. From a knowledge of the monumental buildings of Europe and America he would glean theories of design and composition which were denied him in the architecture of his own country. He would understand the value of a motif, and would see how new theories arose from the associations of ideas which were dissimilar in general aspect, but which had a common factor when blended. They lived in a mechanical age; an age of restless activity, of the whirling of wheels, and the slavery of the machine. Was it desired to express the brutal spirit of the mechanism which was fast enslaving them? Rather it should be their duty to make a slave of the machine, as was at first intended. Architecture to-day was fundamentally international in its tendencies. Being an art of expression, it was more limited in its scope and less adventurous than Science.

His paper was not an apology for the Classic movement of to-day; neither did it advocate any particular phase of Classicism. Let it be regarded as a statement of facts—a purview, so to speak, of the development as it stood at this time; and a plea for a return to sanity. There could be no doubt of the fact that



### IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

### A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20 ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight. Superior, and costs less than cutting from Sheet Lead. No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.



sanity and reasoning would ultimately bring a change in the realm of international architecture. There was already a movement in Europe and America for carrying the science of stylistic building a stage further; in other words, combining tradition with functionalism, which in itself was but a return to the time-honoured procedure that had always accompanied outbursts of artistic endeavour.

Art, if it was to be successful, whether it took the form of building, of pottery, of metalwork, of painting or sculpture, must be the embodiment of an idea. In the remote ages it originated with the customs and needs of everyday life. At first crude, and direct in statement, like the Egyptian, it developed from primary forms, determined by materials, into stylistic expression in which the nature of the original material was only faintly discernible. As civilisation succeeded to civilisation, from Egypt to Greece, Art, while retaining its spontaneity and to some extent its directness, became more and more complex. At the height of Greek prosperity, and even during the decline, conventional form had become standardised for all time. The Romans accepted the Greek stylistic expression, but experience taught them the value of increased scale combined with vastness of construction. Mediæval art was the natural outcome of the passing of power from a military to an ecclesiastical authority. The Renaissance in Italy brought about, as the term indicates, a revival of the stylistic artificialities of the Classic world. There was a further increase of complexity. As a result, for the past five hundred years throughout the world a further expansion of the Classic theme ensued, which for convenience could be termed modern.

Expression, inasmuch as it aimed, and still aimed, at the Classic point of view, did not necessarily, in its widest aspect, imply pedantic copyism. Great advances had been made in France and America, where planning on highly specialised lines had been studied. The French and the Americans had attempted to correlate all the branches of art, ancillary to that of building, and had in consequence produced some remarkable results, both nations realising the advantages of Art as a commercial asset. In England, the greatest advances had been made on the domestic side, particularly in connection with recent housing developments. On the civic side England had much to learn.

Originality was clearly a question of the right interpretation of modern social conditions; if the latter were sympathetic, fine art should result. The converse was equally true, for art in itself was an inspiring and compelling force, which did its work as an upraising factor. Buildings must be considered as the primary features of conventional scenery; painting, sculpture and the pleasant shaping of domestic articles for ornamental use form the minor expression of an age. They suffered to-day from the trade of exploitation of the antique, from the catalogue of things they could well do without, and from the products of those designers who were least qualified to satisfy public needs. Never at any period in English history had there existed such a galaxy of talent as that in evidence to-day, but for want of discipline in training as well as for the lack of an appreciative audience much of the good work was obscured by the bad.—*The Builder.*

## THE PLANNING OF THE MODERN CITY.

(Second edition.)

Mr. Nelson P. Lewis, as a leading American civil engineer, and former engineer to the Board of Estimate and Apportionment, of New York City, strikes a note which will appeal to municipal engineers, not only of his own country, to whom his book is dedicated, but also to engineers throughout the British Empire. The subject is treated from a municipal engineer's point of view, and, as such, deals primarily with the city-planning movement, especially in its relation to transportation problems, by water, rail or road.

Each of these branches of the subject is dealt with in extensive detail, and the chapter on the railroad in relation to the street system is of particular interest to English engineers to-day. Essential as the railroad is to the prosperity of the city, the long lines of embankments and deep railway cuttings passing through the built-up area of a town always present great difficulties in the development of an adequate street system. The different railway lines entering a city cannot be allowed to divide it into sections which are, perhaps, almost or entirely isolated, the one from the other. The rival claims of the road and the railway are well balanced in this chapter, and it must be recognised that the railways leading to and from a city are an all-important part of the town plan, and should be considered as such, and not treated as a separate problem.

Parks, recreational facilities, and civic centres, the latter playing a much greater part in the life of an American city than in cities of this country, are treated in a manner which arouses interest, even if some of the suggestions are not applicable to our own older cities. Perhaps the most interesting chapter in the book is that entitled, "The Economic Value of a City Plan." It is always difficult to capitalise the advantages of any improvement or "betterment" which is for the free use and benefit of the public. Statistics, if skilfully handled, can be made to prove or disprove anything, and, when it is a question of expenditure of public money by a corporation, we are, most of us, only too well aware of the criticism which can be levied at the municipal engineer in his efforts at improvement by the misuse of figures. For "when an attempt is made to estimate the value to the city, or State, of a more robust and vigorous manhood, and improved working conditions, and the consequent saving in the annual budget for charities and the maintenance of order, we are always dealing with something we know to be of enormous advantage, but one which can scarcely be expressed in £ s. d."

Some novel methods of dealing with the cost of various projects for general city improvement adopted by American cities are given, and if the methods hardly lend themselves for use in this country, they at all events should instil encouragement to get on with our job, and perhaps, also, a certain amount of American hustle in doing so. Many useful statistics have been collected on the subject of street traffic. Zoning, without which no town-planning book could, we suppose, see publication, is given in perhaps a rather cumbersome way. Fortunately, many of the problems arising in an American city are not to be met with in our own. A committee on zoning has been appointed by the



American Secretary of Commerce to draft a model zoning ordinance, and to prepare a simple, comprehensive statement of what zoning is.

"Zoning," we are told, is "the application of common-sense and fairness to the public regulations governing the use of real estate. . . . It is a painstaking, honest effort to provide each district or neighbourhood with just such protection and just such liberty as are sensible in that particular district"—but the reader must himself finish the chapter to decide whether the definition meets with these requirements.

Some good "garden-city lay-outs," both plans and photographs, illustrate a chapter on the subject. Interesting facts are given in the chapter on "City Planning Legislation," but the succeeding chapters, "Progress and Method," and, particularly, "Financing a City Plan," are to be commended to the reader who is a little wearied, and inclined to say that there is nothing new to be read on the subject of town-planning. The use to which America is putting aerial photography is a hint to the regional surveyors in this country. The final chapter is one which must send the wearied municipal engineer back to his task with fresh zeal and inspiration.—*W. R. Davidge, in "The Builder."*

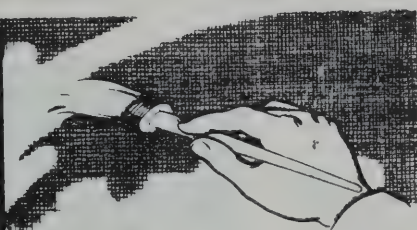
## ARCHITECTURE AND DECORATION

In connection with the Royal Academy Winter Exhibition of Decorative Art, Sir Reginald Blomfield, R.A., gave a lecture on "Architecture and Decoration."

Sir Reginald said that the history of art showed that

however content an architect might be with the completeness of his own art, mankind in general wanted something more. The problem for the artist was not only to draw well and paint, or model or carve well, but to use his brains in co-ordinating those with the architecture, so that the two or more arts all pulled together towards one pre-ordained end. The Parthenon in its completed state was probably the most perfect example that had ever existed of architecture and decoration, because the architect, the sculptor and the painter worked with complete understanding of each other's limitation and resources. Architecture, of course, touched every form of permanent decoration—the sculptor, painter, the worker in metal, stone, marble, wood, glass, mosaic, almost every art and craft—but he would limit his remarks to the sculptor, the glass painter and the painter proper.

The first rule that came to his mind was one of Aldrech, the famous Dean of Christchurch, who wrote a manual of Civil Architecture about 150 years ago. His advice in regard to sculpture was, not to have too much of it. "Coalatura minea venustatem opprimit"—"too much ornament crowds out beauty"; that was what happened in the work of the earlier Italians and French Renaissance, when the sense of architecture was lost under the embroideries of the ornamentalist, and was not recovered until really competent architects took charge, men such as Bramante, Peruzzi, and San Michele in Italy, Inigo Jones in England, and François Mansart in France. Those interminable arabesques, panels and friezes and pilasters, covered with orna-



## Quality Tells

In practically every phase of life  
this is apparent and recognised.

RIPOLIN is manufactured under a secret process from the very highest grades of raw materials obtainable—the quality never varies.

WHITE AND 52 ARTISTIC SHADES PROCURABLE

For Painting Front Doors, Window Sashes, Front Gates, Guttering, Downpipes—in fact on all

exposed material it is less costly than paint and varnish, and will last much longer. On inside work Ripolin is practically everlasting. RIPOLIN can be applied over White Lead, White Zinc, &c., but for most perfect results Ripolin Special Undercoating is best.

**L. A. CORMACK, Factory Representative, 4 Underwood St., Sydney**  
(off 35 Pitt Street)

TELEPHONE B3284

Interstate Agents—MELBOURNE: Louis J. Eggleton, 379 Flinders Street; ADELAIDE: Clarkson Limited, 124 Rundle Street. BRISBANE: S. J. Squires & Co. Ltd., 171 Elizabeth Street.

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

ment very skilfully executed, but destitute of meaning in relation to the organic structure of the building, façades, such as the Centora at Pavia or the Madonna des Miracoli at Brescia, were not architecture at all, and few things had done more to retard art than the misconception of ornament as architecture. Sculpture of that kind was the expression not of an artist's mind, but of a tradesman's skill paid by the yard. If sculpture were used at all on a building it should be used with a definite meaning, never for its own sake. If they looked back on the history of architecture they would find that the great periods of the art were precisely those in which sculpture had been most in restraint. It was in the weaker and immature periods that sculpture got out of hand, breaking all measure, degenerating into vulgarity, and even nonsense, as one might see in the trade ornament of modern buildings.

The matter of the placing of ornament was of the first importance. Good ornament in the wrong place was worse than no ornament at all, and the architect was directly responsible for that, not only as it affected the design as a whole, but also in relation to the work of his colleague, the sculptor. It was no use placing sculpture where it could not be seen or was seen under conditions which reversed its values, or where the space was so contracted that the sculptor had no room to let himself go. For example, the sculptor would not thank the architect if he found the recess provided for his figure was too small, or the pedestal impossibly bad. Again, though it rested with the architect to allocate the work, he ought not to impose tasks on the sculptor which were wrong in principle, such as terminal figures clearly unequal to the work, or sculpture which stultified the original intention of the architecture. In the matter of placing or allocation, the architect and the sculptor ought to pull together from the first, and that was the first point on which they must come to a working agreement. Having done that, they had next to consider the purpose of the building and the all-important matter of scale. It was obvious that the purpose of a building must determine the general character of its decoration, and ordinary common sense could deal with that, but the question of scale was far more difficult; indeed, it was in the matter of scale, more than anything else, that they were apt to go wrong. However great an artist's natural endowment, the sense of scale had to be painfully acquired by much study of buildings, and meditation on sculpture

in relation to buildings; no amount of designing on paper would build up that sense in the architect, nor would modelling in the studio, however accomplished, take its place for the sculptor. It was there that they were all so seriously handicapped by the want of tradition. Down to the end of the eighteenth century, artists were saved from glaring faults by a well-recognised standard of technique and by accepted principles of design. All that was lost in the general upset which finally crystallised in the rise of the Romantic School in the early part of last century, and the artistic anarchy that had prevailed ever since. The training of architects two or three generations back had much to answer for. As a consequence of the unfortunate misconception of architecture, generally known as the Gothic Revival, their intention used to be concentrated on detail, mouldings, capitals and carvings. Nowadays it seemed to have gone to the opposite extreme and to have become academic in the wrong sense. It seemed to him that sculptors made a similar mistake in isolating their work and limiting their technique to modelling in their studios. Even in the days when a tradition of monumental architecture did exist, serious blunders of scale had been made, and it had always seemed to him that one of the reasons why St. Peter's looked smaller than it was was that the figures in the spandril's and pendentives were much too big. In monumental architecture the whole was greater than the part. It was far more important that the whole composition should hang together than that any part of it should be elaborated in the vain hope of saving a loose design by one masterly detail.

Owing to a variety of reasons, which he could not there indicate, there had grown up in the last hundred years an unfortunate division in the Arts. The painter painted his easel picture, the sculptor modelled his figure or his bust, and the architect designed his buildings, each of them working in his own corner without thought or care of the other. They had among them excellent sculptors and, might he say, at least, competent architects, but in their schools of art and elsewhere they ought to be brought into much closer touch than had been the case for many years. It was a fatal thing for sculpture when it left the builder's scaffold and retired into the studio, and when the architect forgot the heroic precedent of Greece. There was fashion now prevalent of presenting sculpture in blocks and squares. That work appeared to be



# IN DAYS OF OLD

RECORDS WERE PRESERVED ON STONE

TO-DAY THEY ARE PRESERVED ON STEEL

## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.



## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.

WRITE FOR INFORMATION

## STEEL PRODUCTS (Australasia) LIMITED

Corner of CASTLEREAGH and REDFERN STREETS, REDFERN, SYDNEY

Phone: REDFERN 819.

Cables: "ADEQUATE."

Postal: G.P.O. Box 38, SYDNEY



## The Ornamental Steel Manufacturing Co. Ltd.

We are Craftsmen in the Manufacture of  
**Ornamental Steel Gates**  
**Entrance Doors and Railings**  
**Collapsible Gates**  
**Lift Enclosures**  
**Lift Cages**  
**Grills and Tenants' Boards**

**Metropolitan Mutual Life Building**

Cr. HUNTER and BLIGH STS. : : Tel. B 5610

inspired by the art of primitive peoples, who got so far as they could with their posts and blocks, but were necessarily headed off by want of knowledge, want of the proper tools, and, not least of all, by the limitation of their own ideas and the harsh conditions of their environment. To attempt to translate modern thought and ideas into terms of repression which were almost inevitable in the twilight of civilisation appeared to him the merest affectation; there was one permanent objection to those raids on primitive art that they converted the interiors of their buildings into museums. A figure could have no sort of decorative value if it were hopelessly out of relation to its setting. The proper setting of a South Sea Island god would be on its own altar surrounded by the relics of the last cannibal feast, but to introduce him into their modern buildings was like letting loose a "salvidge" man in the drawing-room.

Stained glass occupied a curious, and in some ways, anomalous position in modern decorative art. In days when there was no printing press, when the majority of people could neither read nor write, the glorious imagery of the windows of those great cathedrals, Chartres or Bourges, of those churches such as Fairford, were as the very book of life, revelations by artists as convinced of their literal truth as were the people who worshipped below them. It was a very genuine and sincere form of art. Mr. Lethaby went so far as to say: "The window of dyed glass is the most perfect art form known." However earnest the modern glass man might be, it was almost impossible for him to maintain that level of complete conviction. Instead of the implicit faith on which the mediæval artist could rely, the modern artist might find sympathy in certain mystical temperaments, but in all the details of his representation he had to reckon, not with the implicit and child-like faith of a people as convinced as himself, but with critical and even pedantic archæological opinion. The result was that ecclesiastical decoration was apt to stand in the same relation to decorative art as "the hymns that we all sing"—to use Matthew Arnold's unkind phrase—stood to poetry. The fact was that certain phases of the arts belonged to special periods and special states of mind, and he was inclined to think that the art of the glass painter was one of them. There was another difficulty that he had to contend with. Unconsciously he and the wall painter were in direct antagonism, in that the one deprived the other of the light that was necessary for the effect of his work. It was very little use finding spaces for the wall painter if as soon as he had finished his work the light on which he had reckoned was reduced by 50 per cent. It would seem that those who had the custody of their churches and cathedrals should make up their minds whether they wanted their decoration to go on their walls or in their windows. If they elected for painted decoration on the walls they should, at least, allow the painter light enough to show his work. If he elected for windows they should limit the work on the walls to mosaics which, by the nature of their material and the necessarily abstract nature of their design and drawing, were able to tell their story in the half light, half shadow of a dimly-lit church. Most of the impressive effect of the mosaics

of St. Mark's, and at Ravenna, were due not only to their severely abstract design, but also the mystery of their forms, half suggested, half lost against the shadow. He was assuming, of course, that the building in question was not a classical building, that it was one set out to catch all the happy chances of romance, not designed on a complete and consecutive scheme in which the masses and planes, the voids and solids, were thought out as such from the first. He did not think in the latter there was much opportunity for the use of painted glass, and it was better away. Yet some very beautiful modern stained glass work had been done by English designers and craftsmen, far finer, in his opinion and far more suitable to its purpose than any that he had seen on the Continent or elsewhere. That there was and would be a demand for it he had no doubt; all one asked of their artists in that regard was that in designing their windows they should think of them as elements in one great harmony.

With regard to decorative painting. Sir Reginald said the interior of a building ought not to be considered as one gigantic picture; the two arts of painting and architecture were not really united. One of them had to be sacrificed entirely, and the better way was for the architect to endeavour to realise from the first the general problems of his scheme, the relation to plain, to decorated, surfaces, and to reserve and clearly mark out on his design the spaces which he wished to have painted, such, for example, as panels, lunettes, domed surfaces, and the like, definitely marking those off from the constructional features of the building. Within the spaces so allocated he would leave the painter a free hand, and make no further protests on the score of illusionism.

A point, however, did arise in regard to which the architect and painter should agree. Apart from the difference of treatment necessitated by the difference of purpose, different modes of architecture carried with them their correlatives in painting. If the painter wanted an orgy of colour he must have an orgy of architecture with it. There was one other matter in which the painter might with advantage work more closely with the architect, and that was with the actual design of the architecture that he introduced into his painting. It was sad to find imaginative visions spoilt by quite ignorant architectural drawing. Architects would readily place their technical knowledge at the disposal of their colleagues, and he suggested to students who contemplated decorative paintings that they should study the external forms of architecture more closely. He believed it to be quite as important for architect and painter to work together in decorative schemes as it was for architect and sculptor, and he did not think their colleague need be afraid of them. They did not all live in palaces, and municipal buildings were not the only ones that cried out for decorations. For those few old-fashioned people who preferred to live in a house of their own there was still the opportunity of decorating their houses with something more interesting and individual than the latest thing in wall papers. He believed that a future was opening out there for their painters, the signs of which were full of promise.

—*The Builder.*



## ARCHITECTURE AND THE PUBLIC.

The final of the series of six public lectures, organised by the Royal Institute of British Architects, was delivered recently by Lord Sumner, of Ibstone, G.C.B., C.P.

The lecturer took as his title "The Public and Architecture," and in the course of his address said he would first like to make the point that the public were indispensable to architects, and the public should do their best to create an atmosphere of appreciation of architecture. To fit themselves for the purpose, the public should first of all rid their minds of cant and clear themselves of sundry fallacies and superstitions, which seemed to attend the views of people who wrote for the public. Such phrases as "Architecture must be fit and fine and coherent" should not be used. The public should also get it out of their minds that it was necessary for architecture to be picturesque, or historical, or conscientious, or fashionable. Ever since the introduction of Queen Anne architecture people were hardly satisfied with a country house without it mostly consisted of gables, twisted chimneys, climbing roses, and crazy paving; and in a town they were not satisfied unless a building were hidden by trees, and no church tower was apparently satisfactory unless it were enshrouded in ivy. He thought all this was pure fallacy. If a building were good one should be able to see it, and if it were not good enough without ivy and twisted chimneys and crazy paving, it was not good enough at all.

Also, it was not a test of a good building that it looked picturesque—Charing Cross Bridge (than

which no more hideous thing existed on the face of the globe) could look picturesque in a fog. Much was said about "conscientious" architecture, but what particular recommendation was there in carving the back of a piece of sculpture as carefully as the front if the back would never be seen? Was the architect to be called unconscientious because he economised his efforts and materials and devoted them to the parts that could be seen? He thought not. He thought the superstition that there was a virtue in styles should be got rid of—it seemed that nothing could be good unless it belonged to some style or other. That, of course, meant that if an architect designed something good he could not get away from everything that had gone before. But it was not necessary to be orthodox in architecture in order to be meritorious.

Another superstition was that some styles of architecture were suitable only for some purposes. Those who believed that said, for example, that Gothic was a Christian style and, therefore, a place of worship must not be built unless in Gothic. If they wanted to consider how much care and talent could be expended in adapting the Gothic style to purposes for which it was not really fitted, they should look at St. Pancras Hotel, the new University Club in St. James's Street, and the Law Courts. If they wish to see to what Gothic could descend they should see Viollet-de-duc's designs for Gothic architecture carried out in iron framework. Viollet-de-duc had an elaborate theory that iron, having become a great structural material, was a suitable medium for combining the architecture of the thirteenth century with the methods of the eighteenth century,



1. Light Battens checked into studs.



2. Nailing "AdamO" Sheets.

### Architects Specify "AdamO"

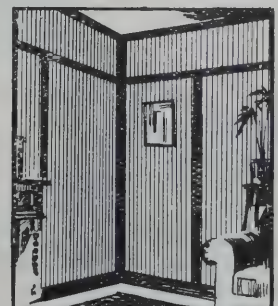
because it will not buckle, warp or crack, and readily lends itself to Artistic Treatment.

### Builders use "AdamO"

because it is light and easy to erect. "AdamO" is sawn and nailed like wood.



3. Painting.



4. The Room Complete.

Booklet free on request to

**William Adams & Co. Ltd.**

Cr. King & Clarence Streets :: Sydney

With Branches in all Six States

and there were some of his buildings in Paris which filled one with pity and fear.

An instructed public, a critical public, and a public prepared to tell the architect that he knew what they wanted and meant to get it, would be the foundation of a well-informed clientele, and should do their best to secure for the architect his indispensable conditions. The first of those conditions was a clear atmosphere; it was possible to prevent coal smoke with economic advantage to the country. Another condition was that architects must have space on which to build, and that their works should not be blocked in by other buildings.

He would also like to ask how any street architecture could be dignified so long as the present system of shop fronts and shop setting prevailed? While clients insisted on a maximum of plate-glass and on writing their names diagonally across a building in letters 6 feet long architecture would be banished from the streets.

If the public instructed itself on architecture it would be the duty of the architects to give of their best. No architect should permit a client to override his artistic conscience; he should refuse to be driven into hideous designs or ill-proportioned shops or pretentious decorations simply to please the person who was going to draw the cheque. The present generation possessed great architects, and he trusted that in the next generation their works would be written large on a rebuilt London.—*The Builder*.

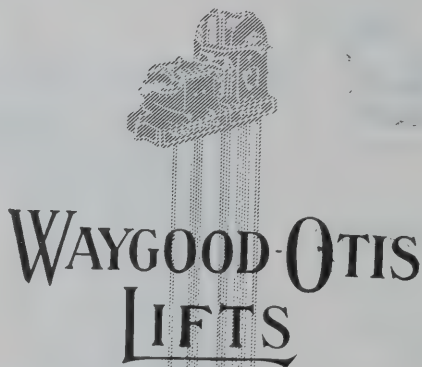
## THE RECONSTRUCTION OF ANCIENT EDIFICES IN THE DEVASTATED REGIONS OF FRANCE.

Some interesting details on the above subject were recently given by M. Paul Leon, of the Academie des Beaux-Arts, at the annual meeting of the Institute de France. The work began during the war, said M. Leon. As soon as the enemy were driven back from the Marne (1914), twenty-seven churches were immediately classed as "historical monuments," and urgent repairs executed. After the armistice a gigantic and delicate task presented itself. Yet, as a rule, "one was astonished to find the edifice less entirely destroyed than at first seemed to be the case. Nothing remained, yet all remained—the substructure, the bases of the pillars, a few pieces of wall—but all around were the materials. Mostly intact and on the spot, these could be replaced in position."

For four years everything discovered of artistic value was carried to store sheds around the cathedral, and a most mazing collection resulted. Rheims "was built with the materials of abbeys and churches demolished in the course of centuries." Relics of ancient stonework, incorporated in the walls of more recent constructions, were thus brought to light. Careful comparison by experts resulted in interesting reconstructions, such as a pillar of the name of St. Nicaise, and arcades of the old cloister of the chapter. The fall of a house revealed a Gothic frontage hitherto hidden and unsuspected. The substructures of ancient and half-forgotten edifices were laid bare—the convents of the Cordelier and Jacobins, St. Pierre-le-Vieil, St. Michael, the church of the Canons and old St. Symphorien, the first cathedral of Rheims, consecrated in the fourth century—a fugitive, but intensely interesting glimpse of the past ecclesiastical edifices of the historical city. The repair of the foundations of the present cathedral laid bare the tombs of the archbishops, where croziers, chalices, and other objects of archaeological and artistic interest were discovered. Similar work on Noyon Cathedral brought to light the ancient roodloft, of which the stones had been used as a foundation for an altar.

Of 756 "historical monuments" injured by the war, twelve were entirely annihilated. In fifty-two cases the question remained to decide whether restoration was possible or desirable. A special committee of technical men and artistic authorities was examining each case. The nature of the edifice had to be taken into consideration. To restore the grandiose and massive keep of the castle of Coucy would doubtless be a costly and chimerical enterprise. A town hall or church was a different proposition. The old gabled houses round the squares at Arras had already been rebuilt; the population unanimously called for the restoration of the belfry. At Mont-Notre-Dame, near Soissons, the magnificent naïve had been blown up, but the materials lay around, and reconstruction was perfectly practicable.

More complex was the work of provisional consolidation of edifices of which the definite restoration must be at present deferred. The first point was to prevent further disaggregation. The walls must be protected against the action of the weather; if possible, a light roof put on. Once thus sheltered, the stonework is



ALL PARTS STANDARDISED  
Fitted in the Principal Buildings  
Throughout Australia

Waygood-Otis (Aust.) Pty. Ltd.

4 Nithsdale Street, Sydney, New South Wales  
80 Queen's Bridge Street, Melbourne, Victoria  
Tyrrell Buildings, Telford Street, Newcastle



examined. A gap is filled with rubble, an arch piece placed under a shaky flying buttress, a crumbling statue canopied. For two years such temporary work has gone on at Rheims. Cambrai Cathedral tower, 190 feet high, had an enormous breach of 50 feet from the ground. Its destruction by explosion was first considered, but the ingenuity of the architect and the skill of the workmen enabled this to be avoided.—*The Builder*.

### AN INDUSTRIAL ROMANCE.

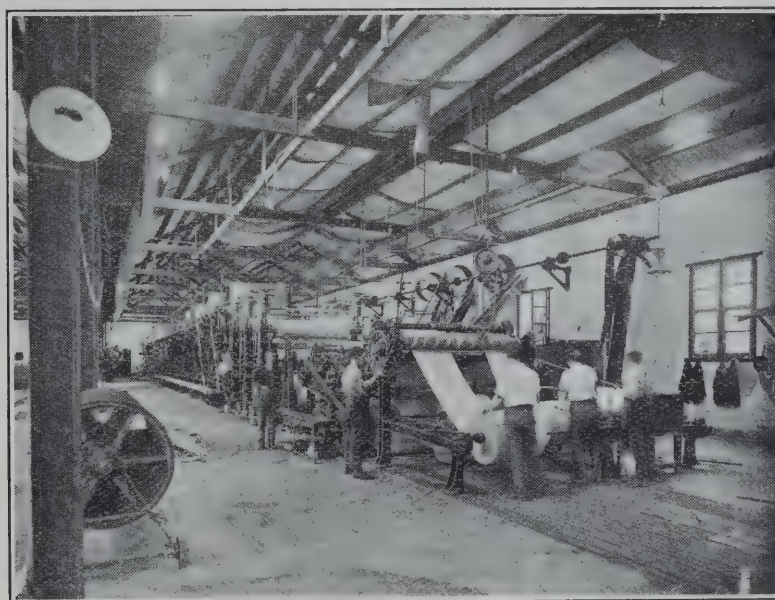
For many years Australian timbers have resisted successfully all efforts to tear them to shreds for the purpose of pulp making, and so manufacturers using pulp have perforce had to fall back on the spruce of Norway and Canada for their raw material. Other countries, too, have contributed to the demands of scientists and engineers for pulp fibre.

At last the energetic men of science, with true Aus-

tralian grit and determination, backed by all the resources of the laboratory which generations of their fellow craftsmen have accumulated and handed on to them down the years, have at last signed an armistice with the spirits of the Australian back blocks.

to put up—a lasting monument to scientific knowledge, incorporated in industrialism. In this manufactory some four hundred persons gain a livelihood and share £2,000 a week. New avenues for the absorption of Australian raw products and its conversion into marketable materials of vital importance to the Commonwealth, which hitherto had to be imported at enormous expense from other countries.

Mr. Bain is an enthusiast—he has one eye on the plant and the other on the dividends. He does not



Small Section of Gigantic Machinery at Cumberland Board Mills.

This milestone in Australian progress is due entirely to the enterprise of the directors of the Cumberland Paper Board Mills, headed by Mr. F. J. Doherty, who wanted a local wood pulp for their business, and were out to see that somehow they got it.

Experiment after experiment was tried, and finally a solution was evolved by Mr. Doherty, assisted by his trusty lieutenants at the mill.

#### *The Cumberland Power Plant.*

In the upper reaches of the Lane Cove River there is a picturesque inlet in which nestles a large, commodious factory that cost some half-million pounds

and find much romance in engineering, apparently, in spite of the wistful glance he gives occasionally to his beloved engines, while he explains just how all the wheels go round and why.

The mill is busy turning out wall-boards known as "Adamo." The illustration gives an idea of some of this firm's machinery.

#### *The Process of Manufacture.*

Australian timber is singularly different from the soft woods of other climes; hence it requires much treatment before it finally is resolvable into pulp. However, once started on its course it goes through the mill in more senses than one, and acquires a high factor of tensile strength.

First of all it emerges from the cradle in the store room; its kindergarten education consists of being ruthlessly flayed between massive steel discs turning in

opposite directions. The discs on the "squeezing" sides are serrated in a peculiar zig-zaggy manner. A constant stream of water is playing on them. The material passes through three sets of these discs and then goes between stone discs, where it becomes more amenable to fluid persuasion. It then passes on to the "beater," which consists of a large circular tank, on one side of which a drum revolves. The contents of the tank are thus kept continually agitated. The drum has a series of blades protruding, whilst the floor of the tank, immediately underneath, has corresponding protrusions. This mechanism and arrangement effects complete separation, and the whole is thus intimately mixed. Size is now added to the mixture, so that every particle becomes impregnated with a reinforcing medium. The resulting mixture looks like watery bran mash.

From the bran mash stage the material passes through a calendar or refiner, whence it becomes pulp. It next finds itself in a trough in a lofty, imposing room, 580ft. by 75ft. This is the machine room and is the beginning of the finishing stages for the pulped material.

In the trough itself revolves a slowly moving hollow meshed cylinder of considerable length. The meshing is fine wire. A suction plant from inside the cylinder draws the pulp to its sides, and air currents keep it from sticking and send it corkscrewing through the trough. The object of this process is to produce a "warp and woof" effect. If left to themselves the tiny particles of pulp would probably all point, say, north and south, but picked up whilst in a state of agitation,

they criss-cross and thus add to the strength of the finished material.

When the pulp has completely covered the rotating cylinder mesh, it is transferred to an endless blanket belt. This blanket carries it over a distance of several yards, passing in its course over a series of drums. The resultant substance now has acquired the consistency of a mat-like material, as its moisture content is about 65 per cent. The material is now in condition for blending with four other similar "mattings" which have previously been meted out a similar treatment. The five compositions now pass collectively through a mangling machine and emerge as a composite whole. The composition is still damp and this has to be removed by pressure and heat through the intermediary of 20 pairs of steam-heated steel cylinders, working mangle fashion.

At the conclusion of the process described above, the material is bone dry and thoroughly adhered, and is now ready for the final rolling by massive steel rollers, which reduce the whole mass to the final thickness which is to within 1/1,000th in. of the measurement prescribed by the superintendent.

The sheets have now only to be cut and trimmed to required dimensions to complete the manufacture. This is done by means of a system of circular knives. It is estimated that the boards from the tank to the cutters have travelled, as the crow flies, 300 feet, but, in actuality, they have covered some half a mile.

In the making of "Adamo" wallboard four of these milled boards are joined together by an amalgam cement. The four boards, by means of ingeniously

## The MOTOR IN AUSTRALIA

Telephone—B 1219

From any Bookseller  
in the Commonwealth

Address

Northcote Chambers  
16a Pitt Street, Sydney

Price **6** Pence

is not filled with dead matter lifted from the weeklies of Australia, Britain, and America. It is bright and original from cover to cover, well printed in type that anybody and everybody can read, and profusely illustrated. It is both a Magazine and a Trade Paper. Readers will find bright stories, paragraphs, pictures and fresh news.

Advertisers will find a large and growing audience of moneyspenders to interest in their commodities.

**Should be Read by Everybody**

SOLE PROPRIETORS, PRINTERS AND PUBLISHERS

THE MOTOR PRESS OF AUSTRALIA, LTD



contrived rollers, converge at a given point, but the two inner boards before converging pass through a bath of amalgam cement.

After convergence, the whole passes through rollers at immense pressure and emerges as a shining, solid plank. These planks are then sized back and front, and are passed into a drying and maturing room, after which they find employment in both palaces and homes; and even more extensively in offices and bungalows. In fact, everywhere where a light, artistic, and durable wall covering, ceiling or partition is required.

The "Adamo" board should certainly commend itself to all who build and design buildings, as it has such a multiplicity of uses. It is entirely produced in Australia by Australians. In price it can compete with its foreign competitors on a quality for quality basis. It is an improvement over many kindred productions in that its surface is super-smooth and is, therefore, par excellent for decorative schemes, taking paper or paint with perfect effect. Its durability is fully established, so also its insulating properties. It is impervious to temperature, its characteristics are all that could be desired, and its tensile strength is, beyond the pre-adventure of a doubt, unequalled.

William Adams & Co., Ltd., of Clarence Street, Sydney, are the agents and will be pleased to supply architects and builders with full particulars on request.

#### ELECTRICAL FEATURES OF NEW AMERICAN HOTEL.

A new hotel, costing over a million dollars, has just been opened in Atlanta, Georgia, which is so replete with electrical features that it has been called "the biggest and most complete 'home electrical' in the State," perhaps in the whole United States.

In each of its 328 guest rooms there is everything desirable in the way of electrical equipment. Nearly \$175 were spent on the electric wiring and fittings of each room, which is almost as much as is expended for the total wiring in the average \$10,000 home, where as a rule, the wiring is insufficient. The total amount expended on wiring and electrical equipment for this hotel, in the guest rooms alone, was close to \$60,000, or about 2½ per cent. of the cost of the entire structure.

One hundred and sixty thousand feet of rubber-insulated copper wire, a car load and a half of conduit and more than 1,700 convenience outlets have been used.

Each guest room has a ceiling and a bracket light, a bracket light in the bathroom, an automatic light in the clothes closet and two convenience outlets for fans, curling irons and other electrical appliances. Much other electrical equipment is to be found in the dining room, grill, sun parlour, ballroom and kitchen.

#### EXTERMINATING BORERS.

Much publicity has of late been given to the question of dealing with the various species of borer, and the

practical and scientific world are exercising all their powers to combat this pest in order to prevent its spreading, and to preserve the timbers of this great Commonwealth from its attacks. Architects generally are fully seized with the importance of this matter, and may be looked to as being a body of professional men who are ever ready to conserve the interests of their clients by only specifying the best materials for the various portions of the building to be erected. The importance of all timber being rendered borer and white ant proof cannot be overlooked, and while this matter has received the earnest attention of architects in the past, they have been unable to recommend a sure and certain specific that would, without staining the timber, or causing it to deteriorate, give that degree of immunity which is to be desired. This is now possible, for after years of study and research, a specific has been evolved that has been tested by the experts of the Technological Museum, and proved to be all that its inventors claim for it. It kills all insect life in the wood, in the case of borer proving effective in all its three stages, *viz.*, egg, grub and beetle, and is guaranteed to render timber immune from attack for all time. ANTI-BOR-ANT is manufactured by Australians, in

## STERLING EGG SHELL FLAT VARNISH

FOR FIRST-CLASS FINISH

## ART-A-FEC FLOOR VARNISH

FOR HARD, GOOD  
WEARING FINISH

Sterling Varnish Co.  
ALEXANDRIA

## "PLASTO" THE SUPERFINE FIBROUS PLASTER SHEET

C. V. COBCROFT, London Bank Chambers, Sydney.

Phone B 1462

Australia, for the purpose of protecting Australian timber products, and has been successfully used and tested by Government Departments, public bodies, and private individuals in all the States, and has stood the acid tests that have been required of it. The Borer and White Ant Exterminating Co., Ltd., carry out all their contracts under a legally stamped guarantee of immunity, which protects their clients in every way, and in no case have they been called upon to revisit the scenes of their operations.

The question of cost, is, of course, a material factor, and when it is considered that for an expenditure of approximately 4 per cent., or less, of the actual total cost of any new residence, and less than that in the case of large buildings, the owner can be guaranteed immunity against borer and white ants. This matter of cost is surely infinitesimal.

Timber treated with Anti-Bor-Ant can be stained and varnished, polished, painted or left in the white or natural state without any discoloration or deleterious effect.

Furniture, pianos, etc., can be treated with the same good results, as past experience has proved its efficacy in these directions.

It does not destroy the wood in any way, and will not injure the most delicate fabric.

This firm make inspections and furnish full reports and estimates on any property in the city or suburbs free of all cost. Country inspection and reports are carried out by experts, the charges being for actual expenses incurred only.

A letter to Manager, Dept. B., The Borer and White Ant Exterminating Co., Ltd., Challis House, will ensure prompt attention, our motto being: "Promptness and Thoroughness, resulting in Satisfaction."

#### PREVENTING ROOF TROUBLE.

Very few people realise the enormous loss to the world each year caused by those relentless enemies, Rust and Corrosion.

Last year the Association of Manufacturers of Non-Corrosive and Anti-Corrosive Products declared war on Rust. Mr. Robert Hadfield, the leading spirit of the movement, declared that the world's Rust and Corrosion represents an annual wastage of more than £500,000,000, practically one-third of the annual output of Iron and Steel Products.

It is therefore necessary to protect Iron Roofs and Steel Work with an Anti-Corrosive Paint of good quality, as it becomes a rather expensive item if a Roof has to be painted every three or four years. A good Paint for this purpose is Ferrodor, a world-famed Paint, and one which has been sold in Australia for 26 years. A coat of Ferrodor on Iron and Steel Work does not need re-painting for about seven years, and in some cases it has lasted fifteen years and longer.

William Adams & Company, Limited, are the Australian Agents for this Paint, and also are Importers of Adamax high-grade Asphaltum Roofing, and employ a staff of experienced men for applying the Roofing in the proper manner.

## KANDOS PORTLAND CEMENT



The remarkable success of the Kandos Cement industry has been built upon **RELIABLE QUALITY.** Every bag conforms to the specification of every Australian Government. Be sure you specify Kandos Cement for all Concrete work.

**KANDOS CEMENT CO. LTD.**  
33-39 Hunter Street - Sydney  
PHONES B 6741 and B 6742



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### Light and Plant Growth

*By A. L. Powell, Edison Lamp Works, General Electric Company.*

THE influence of artificial light on the growth of plants has long been a subject of interest to the scientist. As far back as 1861, "Herve" Mangon found that electric light influenced the formation of chlorophyll in a way similar to that of daylight. Since then, at frequent intervals, experiments have been reported in the technical press. Recently, however, with the development of more efficient light sources such as the Mazda C lamp, there has been a renewed interest in the subject, and more tangible results have been secured.

It has been quite definitely proven that artificial light will accelerate germination, increase growth, give greater depth of colour and, more important still, show no signs of the lanky, unnatural extension of the plant usually associated with forcing. One investigator reports that under artificial light, seeds germinated several days, in some cases weeks, before those sown and grown under precisely similar conditions in a control house. The quality of such seedlings is good, stems sturdy and leaves strong, the flowering plants showing an increase in foliage and flowers. It is further indicated that plants grown under artificial light seem to require less heating, and the seedlings less "hardening off," before being planted in the open.

Plant physiologists realise that there are many factors affecting plant growth. These include temperature, moisture, carbon dioxide supply, and period of exposure to light. As with any experiment, to determine the effect of varying one element, other factors must be held constant. The control of these factors obviously requires rather elaborate and expensive apparatus. Therefore, the results obtained from haphazard experimentation may not tell the whole story. Some results however, are so striking as to indicate that the period of the lighting does have a very definite effect on the behaviour of plants.

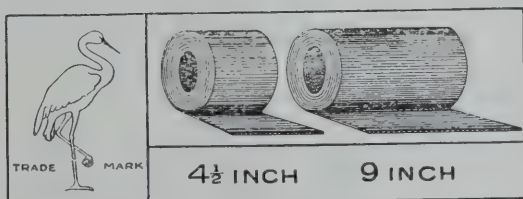
Messrs. Garner & Allard, Physiologists of the Bureau of Plant Industry, Department of Agriculture, have conducted some very interesting experiments on "the flowering and fruiting of plants as controlled by the length of day." They have found that "the relative length of day is a factor of the first importance in the growth and development of plants, particularly with respect to sexual reproduction."

Expressed briefly, they determined that each species of plant has certain peculiar habits which are affected by the relative proportion of light and darkness during a day's cycle. Sexual reproduction can only be attained when the plants are exposed to the specifically favourable length of day. A greater length of day will cause certain species to grow more or less indefinitely and not flower or fruit, while causing other types to flower and fruit with less than normal vegetable development. Plants may be either late or early maturing, depending on the length of day to which they are exposed. Several species when exposed to a length of day distinctly favourable to both growth and sexual reproduction, have shown a tendency to assume the "ever blooming" or "ever bearing" type of development.

These investigators have further determined that artificial light can be used as a means of prolonging the length of day. This fact should be of much interest to horticulturists and agriculturists.

In a given latitude the length of day at certain times of the year is of course definitely fixed by nature. In summer the day may be longer than required for the particular effect desired (vegetation or fruiting), while in winter it is quite likely to be shorter than desired. By shutting out natural light in summer or supplying artificial light in winter, excellent control is possible.

The vital part of the problem is obviously the correlation of data regarding the effects of the various



### IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

### A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight. Superior, and costs less than cutting from Sheet Lead. No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.

periods on the different varieties or species of plants. The experiments conducted by the investigators above referred to, indicate that there is a large group of plants which are brought into the flowering and fruiting stages of development because of the increase in length of day as spring advances into summer. These may be spoken of as "long day plants" in contrast to those which are forced into flowering and fruiting by the shortening of the days in the fall, which may be called "short day plants." As a whole, there are sharp contrasts between the two groups, although there are many plants which may be regarded as occupying an intermediate position. As illustrations of these groups, we find in the short day plants, asters, chrysanthemums, dahlias, poinsettias, cosmos and certain varieties of tobacco and beans. In the long day group are most of the so-called winter annuals and most of our common vegetables.

Artificial light properly used to supplement daylight during the short days of winter effectively prevents many of the "short day plants" from flowering, and forces "long day plants" into flowering and fruiting. With the proper control of temperature and other important factors of plant growth, there is no reason why almost any plant may not be made to flower and fruit in any season of the year and in any region. With proper knowledge of the specific requirements of each plant, the florist should be able to force flowering at any desired time of the year. This is especially practical, due to the fact that a comparatively low intensity of artificial light, in comparison with natural light, can be used to supplement the short days of

winter. The experiments with artificial light conducted by the Department of Agriculture were based on a very sparing use of artificial light. 40-watt Mazda B lamps were employed, so spaced as to provide about 1 1/3 watts per square foot, giving an intensity in the neighbourhood of five-foot candles. This is lower than ordinarily furnished for industrial or office lighting. Higher intensities may give even more striking results.

It is evident that the entire question is one of economics. Does the hastening of plant growth, fruiting or flowering warrant the expenditure for electrical energy? In answer to this, one must make computation applicable to individual instances. In the case of hothouse flowers produced out of season or made available for a certain holiday, such as Easter, it is quite apparent that the added value of the crop at a particular time will be much greater than the cost of lighting.

There is now no doubt that flowering plants bloom earlier and remain in bloom for a longer time with the proper application of this treatment. Lettuce, for example, responds very effectively to increased illumination and heading has been hastened two weeks in certain cases. Strawberries are reported to grow vigorously and have ripened from two weeks to a month earlier than normal with additional lighting.

After experimentation has indicated the desirable intensity of illumination, a simple computation will give one the power or wattage necessary to produce this intensity. Knowing the rate for electrical energy, the cost for lighting, over a given period, is a matter of arithmetic.

A very important phase of the problem not yet fully solved is the determination of the necessary minimum intensity of artificial illumination for producing the desired results. If this is in the order of the five-foot candles employed in the Department of Agriculture tests, then there is no doubt that it is economically feasible to apply artificial lighting for the hastening of flowers and fruits out of season.

An intensity of five-foot candles can be produced at a very low figure, using Mazda C lamps and efficient industrial reflectors. If power costs five cents per kilowatt hour, the expense of lighting 1,000 square feet would be slightly over one dollar per night. As a typical example, in this area could be placed nearly 2,000 Easter lily plants. If by artificial lighting they could be forced a week or two at the critical season, the expenditure for power would be dwarfed by the increase in value.

On the other hand, if an intensity comparable with sunlight is required, the expense will probably be out of proportion to the gain, save in the case of very high-priced products.

In one experiment reported in the technical press, a rather high intensity, 700-foot candles, was used continuously above a plot planted with string beans. This illumination hastened development; in fact, doubled the rapidity of growth. Plants bore fruit in a little more than half the time required under daylight alone. From the experimental area, three quarts of string beans were gathered which at winter prices represented about ninety cents. The power required at five cents per kilowatt, cost one hundred and sixty-seven dollars. This illustration is introduced to indicate that if the

**WAPAMUR CO. LTD., DARWEN**  
MANUFACTURE

**MUROMATTE**  
FLAT OIL PAINT

FOR  
PLASTERED  
WALLS  
WOODWORK  
METAL  
CEILINGS

WRITE FOR  
COLOR CARD  
AND  
BOOKLET



DURABLE  
NON-  
POISONOUS  
WASHABLE  
SANITARY  
SUNFAST  
AND  
LIME  
RESISTING

FOR INSIDE USE.

The Delicacy of Muromatte is equalled only by  
its Durability

**L. A. CORMACK, Factory Rep.**  
**4 UNDERWOOD ST. (off 35 Pitt Street)**  
**Tel. B 3284 SYDNEY**



high intensity used by this investigator is necessary, it certainly will not be feasible to raise such a relatively cheap product as string beans by artificial illumination.

An interesting note recently appeared in the technical press regarding the effect of light on a relatively large outdoor area. A rye patch was near an electric street light, so placed that the light fell on the field in the form of a triangle. The rye in the lighted area was approximately four feet and the plants were headed by the time the remainder of the field was a foot high. This was especially striking, due to the sharp line of demarcation between the two areas. As rye is essentially a "long day" plant, the above effect seems quite logical.

With all this work there is quite apparently a limit beyond which the plant cannot be forced, and further study is indeed necessary. While certain flowers, such as tulips, are reported to have longer stems, richer colour, and larger leaves when exposed to artificial light, others such as petunias, verbenas and primroses, are reported to have been injured.

A comprehensive series of tests on the effect of intensity, colour or radiation, stage of growth at which artificial light is applied, temperature, humidity, etc., is most desirable.

#### ASTOR FLATS FITTED WITH "SIMPLEX" WINDOWS.

Readers will be interested to learn that the windows of the Astor Flats are "Simplex" Steel Reversible throughout.

These "Simplex" reversible windows are now being installed in the majority of modern buildings. Among

some recent structures of note to use "Simplex" steel windows mention might be made of Union House, George Street; Cathcart House, Castlereagh Street; Metropolitan Life Assurance Assn., Hunter Street, and many other important buildings in this and other States.

MESSRS. DOBSON FRANKS LTD. manufacture the "Simplex" window at their own works at Doody Street, Alexandria. This firm also manufactures all classes of steel windows, and they have a line of wood framed "Simplex" windows for which they manufacture all the required fittings at their works.

The reversible type of window has many advantages over the old sort of window; for instance, it can be opened to give the maximum amount of ventilation without any draught. It is rattle-proof in storms and can be opened to any angle. A separate blind is fitted to each window pane on ordinary rollers, which run on invisible wires, and stays rigid to the exact line adjusted to, without any flap. The windows can be adjusted to any angle without fastenings, bolts or nuts, and once they are put, they stay put. The blinds draw from top to bottom, or bottom to top as desired. When the window is closed, it is burglar-proof.

If a breeze is blowing, a slight adjustment of angle makes them form a wind-break, and yet send a steady, revivifying current of fresh air throughout the apartment.

They are, in short, the last word in ventilation, and can be cleaned from the inside by a simple process of reversal; the outside can be dealt with from within. This is a tremendous consideration in these days of high buildings and unsteady nerves.

## "CEMORTA" is 20% stronger than hand-mixed Mortar

A scientific combination of best Portland Cement mechanically mixed with thoroughly dried Sydney or Nepean sand.



WORKS ALEXANDRIA N.S.W.

Government Tests with Sydney sand by the Public Works have proved that "CEMORTA" greatly exceeds the specified requirements of standard sand.

"CEMORTA" is ready for use, eliminates all waste, and ensures uniform strength.

FULL PARTICULARS:—

CEMENT MORTARS LTD., 4 Bridge Street, SYDNEY  
Telephone B 5642

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

## Organisation of the Arts and Crafts

*By James Guthrie.*

ANYONE having a fair acquaintance with the history of what is known as the Arts and Crafts Society and its kindred in England, from the time of Morris to the present day, and who understands the significance of handicraft as the reservoir of new impulses in the arts and manufactures, will be disposed to mix his welcome of the recent conjunction of effort at the Royal Academy with some reflection.

It is evident, for one thing, that the Press, which employs critics who can write about painting, is not alive to the importance of a movement always treated with an obvious lack of enthusiasm, and left without the publicity which it deserves. A critic who is able to find in any average exhibition of pictures the material for a discussion is not necessarily gifted with the knowledge by which stained glass, ceramics, weaving, metal work, etc., can be dealt with. His ordinary resort is to a species of faint praise, or the assumption of superior taste, mainly used as a smoke screen to hide his retreat from a task obviously beyond his capacity. Even on the subject of mural painting, the student may look almost in vain for anything like real guidance; for the study of this art suffers as much from the same indifference towards those handicrafts as they suffer from the lack of a tolerable setting in home or hall.

Criticism, if efficient and constructive, might do a good deal by way of improving the standard of work, rebuking wrong tendencies, and correcting the popular taste. But its present standpoint is against the intelligent apprehension, and without respect of men whose work brings them to the daily tussle with the material, and who have so far done without that public notice which it is the custom of our time to regard as the appendage and property of one branch of art. That there is something against the prevailing spirit in the arts and crafts may be admitted at once. The tradition is still apt to be derived from Morris and Burne-Jones, and the modern element is rapidly losing character by dallying with commerce without the necessary bias, by which alone manufactures can be served by the arts in the fullest measure. Individually, and as a whole, the arts need to be brought to the test. The

artist and the art worker must come together, and must learn from each other. Architecture must provide the framework, and be enabled to form itself with reference to possible enrichment. It is not enough if we are left the thankless task of inventing knights and angels, or of putting together stone and metal, merely from a recollection of how these have been used and admired in times past. The extraordinary thing is, not that the arts suffer, but that they do not extinguish themselves, by their persistent archaism, or by their failure to take a bold step in the face of public neglect.

One never hears a new argument when men wish to point the old moral about art as a luxury; yet it is no more true than it has ever been that the arts can be done without. Cheap goods, as well as expensive goods, may be luxuries, in the sense that we possess them with less persuasion and less need, and regard them more fondly on the whole than we do the many unnecessary embellishments which custom foists upon us—the knobs on our bedposts and the patterns that vex so much of our domestic surface.

The activity of mind and hand seen in any tolerable work of art or handicraft is superior, and eventually of more practical importance than much that is recognised and paid and cultivated in offices and factories. We only learn too slowly how to make use of formative talents, giving them no scope for expansion, just as, at the beginning, we leave their event to chance.

One may also note the division of art into "fine arts," minor arts, and commercial art. These are purely fanciful, but they are industriously used to weaken and diminish the compact sense in which all the arts and handicrafts originally stood together. Painters seeking a wide field for their work have been compelled to find a footing and a relationship with other forms of decoration. They have begun to see new significance in sculpture and woodwork where before they regarded their pictures as unrelated but dominant objects; they have sought for fresh clues in among the fixed conditions of the wall, which have never till now seemed to matter. Much, it may be assumed, of the literalism of modern painting will disappear under



# IN DAYS OF OLD

RECORDS WERE PRESERVED ON STONE

TO-DAY THEY ARE PRESERVED ON STEEL

## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.



## STEEL

Fixtures for Offices,  
Stores, Record Rooms,  
Banks, Libraries, and  
all Government  
Institutions.

WRITE FOR INFORMATION

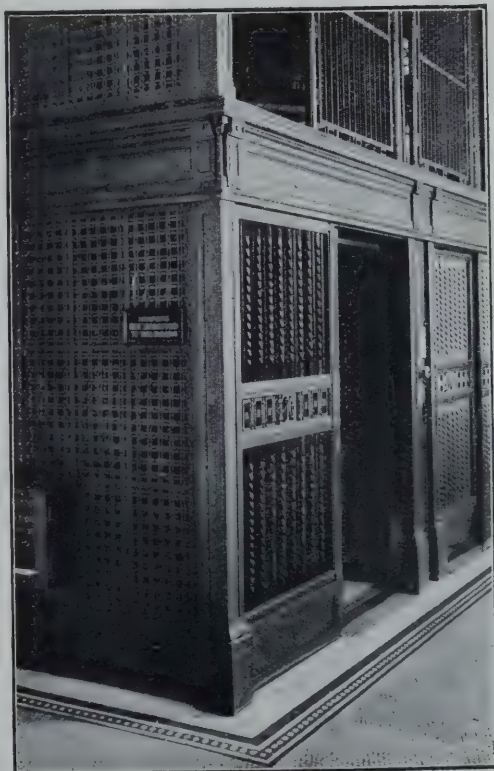
## STEEL PRODUCTS (Australasia) LIMITED

Corner of CASTLEREAGH and REDFERN STREETS, REDFERN, SYDNEY

Phone: REDFERN 819.

Cables: "ADEQUATE."

Postal: G.P.O. Box 38, SYDNEY



## The Ornamental Steel Manufacturing Co. Ltd.

We are Craftsmen in the Manufacture of  
**Ornamental Steel Gates**  
**Entrance Doors and Railings**  
**Collapsible Gates**  
**Lift Enclosures**  
**Lift Cages**  
**Grills and Tenants' Boards**

**Metropolitan Mutual Life Building**

Cr. HUNTER and BLIGH STS. :: Tel. B 5610

this discipline of place. Breadth will have a new meaning for those who are faced by the conditions under which wall painting has to be done, and the ordinary academic subject-matter also will undergo many drastic changes, very much to its improvement.

The most obvious alteration in the character of the work that it is to be hoped will be afforded this revival, is from solitary individualism to an older and rougher companionship. Interesting as the intellectual aspect of painting is, it threatens the manliness and vitality of art. Precocity, dull and intricate learning, a too narrow regard for skill, do not expand, they destroy. When your curator and professor have bound art hand and foot, they are not any more in the story except for mischief. For years past painters have sought new methods with much ingenuity and resource; but what they need is not new methods. Their poverty lies partly in the absence of ideas and partly in the lack of space. They need, that is to say, better education, more experience of men, and walls. The conflict which a large hard wall can be trusted to set up can equally well be trusted to make a workman of an artist, if it does not beat him altogether. And in the process, he will regain lost ground, and be weaned from his dependence upon the comfort which curators and professors take for granted as a portion of the true faith. There are ways in which other arts may attain a degree of efficiency not within the usual limits of school and workshop. Everywhere in the recent exhibition at Burlington House, and in others in London, one feels the same lack of real impetus. It is as though an appeal were being made to the West End by all the faded and bygone tricks. What one man attempts by glittering little pieces of silver, or mother-of-pearl in iridescent slabs, or raised gold lettering, another attempts by huge painted figures or leaded glass. One realises that, with no demand arising from the actual capacity of the arts to serve a real purpose of which they are themselves aware, this appeal to the well-to-do represents a sadly hopeless frame of mind. Yet, to turn in the other direction, and seek a use and a welcome in among the lives and homes of the ordinary people; to establish a place for the craftsman in which his labour may always be found to have a bearing upon progressive manufactures, has all the virtue of good sense, and is a great deal more exciting in the long run. The luxuriousness of art does not lie in its care for beauty; in the enjoyment got from or bestowed by it; in the costliness of it. The only case against the arts and the crafts is that they are dislocated, misdirected, put from democratic usage. The worn-out shreds of rich patronage are long since far too expensive and wasteful. Aristocratic ideas on the part of the artist may have some bearing upon the mien of his work, but they have no social or political significance, and no power to bring duchesses to his door. Romance changes about. Art is still long, and Time still hurries men and modes into oblivion. We cannot afford to support the dismal properties which drag us away from living sensations about men and things, and plant us among knights and monks. Competent workmanship of itself is too little. Skill may be, and often is, utterly divorced from any tolerable occupation. The casual ordinary visitor at a show

of pictures or handicrafts might wonder in what strange forest or many-towered city this array was fashioned, and be immoderately surprised to learn of hermits buried in his own suburban street in the intricacies of Mallory, or engaged in monkish revivals, blissfully detached from their own time. Being curious about the matter, we may even doubt the desirability of setting forth elaborate compositions of figures in public places without more warrant than is to be seen for so serious a step. A fragile idea enlarged upon a wall undertakes more than when it occupies a frame of modest dimensions, and needs a better or different excuse. A wall treated as though it must, by hook or crook, be filled with narrative or allegory, does not seem to meet the case. But the one test of mural painting is the wall, not the study or the studio, and the most obvious practice for the student is the walls of his own home and his own school.

Nobody could follow the development of the decorative arts in this country without feeling that one radical step towards a reunion of these with architecture, if it could be brought about, would be worth more than any other scheme of promotion. Why is this not possible in the most explicit form? Why must the artist and the craftsman be required to form an irresistible alliance before the architect admits what is already palpable? Mural painters already produced in England a quantity of work without gaining any recognition. Men who know something of the conditions and have taken such risks as there are, might, without undue favouritism, be trusted with some of the practical training. Small and select groups, like the Century Guild and the Clergy and Artists' Association, have already shown the way to organise and join forces for some definite end. To-day it is the activity of such bodies which is lacking, with their workmanlike enthusiasm and actual experience. The new Society of Mural Painters must not be allowed to suffer extinction by the belated discovery of this art in official circles. In fact, it is as a group of workman that artists will find their work, and at the same time a connection with the public at large.

Exhibitions are a device to be made use of, but not permitted to rule the arts. Even if they succeed in effecting sales, and in taking silver at the turnstiles in quantities, and in running social functions, whatever sympathy these good offices evoke, they must not be confounded with progress or even prosperity in art. Possibly these large glittering exhibitions blind the public to many brave and desperate labours, throwing a haze of gold and mother-of-pearl over drab and difficult lives. This is, indeed, no guess-work; it is true. A show is not so much a glory as an expense, of which in art there are far too many.

The general belief is that a love of art is stimulated by gathering a quantity of it together. A better way would be to create a spontaneous form of art on the walls of our homes. With what delight one finds a bit of simple design, some flower or bird, painted on a white wall, or embroidered on a coverlet! One realises that art, despite its fashionable air, its large enterprise, its following of professors, curators, and critics, is a home-made product first and last and all the time. And might not this be the clue which we need to take us away from the ineffective pursuit of big business,



our fancy for Italian precedent, our ambition for enormous and unlikely official appointments?

Every artist has his own home, his own relatives, and neighbours. Rather than twisting his gifts into some crooked shape in order to fall in with a wretchedly inefficient system which can never serve any permanent good, why does he not form definite local groups and take a hold upon the opportunity that lies at his hand? For, so long as art is pooled for the benefit of dealers and societies or centralised in London, every artist is beating the air, and letting slip his one chance of being recognised plainly and sensibly among other men in a useful capacity.

What is true of painting is true of all the handicrafts also. The high indifference of the newspaper critics to these is very noticeable. Almost without exception they take cover, not recognising the fact that the handicrafts have done more to keep the love of beauty alive in the home than anything else. There is a danger of the Arts and Crafts Society disappearing from view, because it has no independent policy, and perhaps too little opportunity as a body for the necessary organisation. It suffers, moreover, from the domination of an element of mistaken archaism and that of a modern group intent upon bringing handicraft into the different atmosphere of commerce. While one opposed progress by keeping a stale idea of tradition on the surface, the other works against a living spirit by reducing the freedom and the natural curiosity of the craftsman. And if this body, commonly regarded as representative of what is best in present-day handicraft, persists in falsifying the values and distorting

the facts, the formation of independent groups will inevitably undermine its position in order to bring about ends which can never otherwise be achieved. The business of a society is to represent all groups, not to place one or two in authority.

In detail, these adjustments might well appear to be beyond the power of any association of men who have their own personal labours in addition to such service as they give for the general good. This service, it must be admitted, is considerable. The point, however, is that, although the difficulties cannot be gained, there is no explicit or generally understood direction beyond the immediate enterprise of a meeting or an exhibition. And it is obvious that, without a larger conception of how the artist and the craftsman stand in relation to other men, no single effort can serve as much as it should. We may doubt if these solitary attempts at rallying the work of years do effect a great deal. They emphasise the more clamorous forms of art, and are a testimonial to the survival of many things which in the interval had been invisible; but in the realm of mural painting, and in certain handicrafts, no true judgment can be arrived at from an exhibition. A larger grasp of the whole question is, therefore, necessary, and should be pressed for by every possible means if the unresourcefulness of the arts in their own interests is not to become a byword and a reproach.

Small guilds and industries and shops are capable of affiliation, at least in some simple recognisable fashion. Usually they are neglected, and either disappear or become the servants of some already well-provided



Astor Flats—Indented Bar used throughout

## *SPECIFY* **INDENTED STEEL BARS**

*For All*  
**REINFORCED CONCRETE WORK.**

The **PATENT INDENTED STEEL BAR** is  
rolled in **AUSTRALIA FOR AUSTRALIAN**  
**CONSTRUCTIONS.**

*Let US Quote for Your Next Job*

Sole Agents—

**William Adams & Company Limited**

**175 Clarence Street, Sydney**

**Melbourne, Brisbane, Perth, Adelaide, Launceston**

and protected trade, to the detriment of all that is worth while. The principle of trade unionism in the arts, in fact, was never more favoured than it is at the present time by everybody who needs—and, who does not?—the moral support of organised citizenship. For, although this savours of politics, and, as such, may be considered by many as aside from the subject, no practicable organisation of art workers can afford to exist without admitting the human claims as essential and proper. It has been tried to decide on the score of talent and reputation—both variable and uncertain. The “great artist” can be, and usually is, a nuisance among his fellows. It is not for him that we press the need for a community of interests, for more energy and opportunity. In a wide sense an artist has leave to be a bad artist. That, anyhow, will decide itself. A greater danger would be, and has ever been, the predominance of those who find the rotten old system good enough for all they require. They block the gang-

way, ridicule progressive ideas, drive out men who are more susceptible than themselves to the claims of new talent. They are the allies of the dealer, the cronies of the Philistine, great at revels and fancy dress balls! It is in such hands that art becomes tainted with the world, the flesh, and the devil, a plaything and a luxury ranking with cigars and champagne, but with none of their attraction.

There is always ample room for all kinds of men in every profession. Artists are capable of looking, and being, exactly like aldermen or stockbrokers. It is, nevertheless, vitally important that they should, as a whole, be workmen in the plain, ordinary sense of the word; for if they are not, their appearance in another character will not save them. A lucid, well-considered policy, a large grasp of present-day conditions, a practical alliance with architects and builders, and a solid determination to keep in the forefront, will easily achieve all the rest.—*The Builder*.

## The Spirit of Architecture

(By Robert Cromie, F.R.I.B.A.)

WHEN man builds, he puts something of himself into permanence, and that is the “Spirit of Architecture.” Unlike literature, especially unlike painting, architecture does not vary with current fashion. It cannot be swayed by passing influence, or by conscious dictation, or even by imitation, until such influences have settled down into definite expression. It is slow to move, for its root is embedded in fact, and the natural consequences of a series of facts—which become tradition. Only its externals are subject to the minor influences; the essentials remain persistent as the characteristics of race. They are as definite as the peculiarities of a people. It was not fancy or arbitrary rule that gave the West a steep roof and the East a flat one; each has its natural origin. And the transplantation of styles from one locality to another is as unnecessary and as theatrical as the adoption of the kimono would be in White-chapel. In the same sense, there is as little reason in erecting to-day the sort of building which was contemporary with Herod, as there would be in applying his ethics to modern society. Every architecture has its day and its limitations, and therein lies, not merely its historical value (which is purely academic), but its beauty—the real beauty that is truth. For, willy-nilly, truth is the essential quality of human life; it can be obscured, but not obliterated. And architecture is its record incorruptible. No mean man can create a monument, but any mean man can build a big building. When we scrutinise the known past, we realise that the architecture of the world is no more than an index of mankind—the true illustration of his acts and thoughts, from which there is no escape. “By your monuments shall you be known,” might have been the text of Creation. What, we may wonder, will be the verdict of posterity when our own modern cosmos comes to be examined? If we fail to-day, it is not for want of guidance, but rather due to a plethora of

guides and penny-in-the-slot instruction. With every man his own critic, the essential quality of thoughtful reasonableness that makes monuments of buildings is murdered by conflicting ideals. In the heterodoxy of modern styles, the spirit is sick, surfeited with cheap individuality and confused ideas. And the jugglery of doing anything with any material anywhere is futile and insincere.

The student’s first shock comes when he tries the rules of one style against another. The theories of proportion cannot stand the test. The antique axiom fails. You cannot talk nodules to Notre Dame, nor design on a system of “static symmetry.” No fabric of mechanical measurement can, or ever did, produce architecture.

It was the pre-historic instinct to commemorate that created the monument—the purest form of architecture, a pious erection of stones intended to endure. The perpetuation of a memory, the raising of tabernacles, cromlechs, mastabas (probably the earliest architecture that can rightly be termed monumental), was the outcome of a belief in hereafter, or at least a psychological rebellion against the destruction of nature by nature—a vain desire to evoke eternity. The sacerdotal Egyptian, secret, believer in the unchangeable, discovered in the pyramid the “angle of repose” necessary to safeguard his treasures, which to-day are revealed with such a fervour of curiosity. In the course of mechanical development, the science of construction created the art of architecture—the open book of humanity, whose phrases were of stone and metal, its chapters, dynasties, its periods, wars. It is the unbiassed historian.

Literature and research have illuminated the fog of antiquity; Rosetta stones have resolved the enigmas of hieroglyphics; archaic codes have rendered up their unwilling secrets; but do we not owe our knowledge less to papyrus and parchment than to pictorial decora-





# For the Betterment of Mankind

**I**N the rush of present day living, very few of us ever stop for a moment to sum up the benefits of modern civilisation or to contrast them with past inconveniences.

Electricity, for instance. Marvellous, we say -- but there we stop. What makes it marvellous? Not what has been done, but rather what yet remains to be accomplished. It is the undeveloped possibilities of this magic force which make the whole world wonder what will come next.

And it is the future which will determine just to what extent electricity may become a faithful servant of the public. The past achievements of the General Electric Company are now every day history—from the chaining of nature to create electric power, to the vast number of ways for making that power useful in the daily life of every human being.

Each year has seen some new contribution from G.E. to the world's progress. That this will continue is certain, because of the fact that this whole organisation and its remarkable facilities are devoted to studying the requirements of mankind in every walk of life and fully satisfying them with something electrical.

## **Australian General Electric Co Ltd.**

"Mazda House," c/r Wentworth Avenue and Goulburn Sts., Sydney  
Phone City 3510. Box 2517 G.P.O.

c/r Queen and Little Collins Sts., Melbourne  
Phone Central 2646. Box 538 G.P.O.

BRISBANE—The Engineering Supply Co. of Australia Ltd. (E.S.C.A.), c/r Edward and Charlotte Streets.

TASMANIA—Oliver & Oliver, Hobart and Launceston.

ADELAIDE, S.A.—Charles Atkins & Co. Ltd., 88-90 Currie Street.

PERTH, W.A.—Charles Atkins & Co. (W.A.) Ltd., "Mazda House," 894 Hay Street.

tion, the habit of carving and modelling and mere building? The commonplace implement hidden in the earth bears us testimony, and the monument carved out of rock utters the sentiment with which it was originally imbued for ages. The striving after practical perfection and the early steps in the paths of critical reasoning—a sense of proportion, for instance—are illustrated in the tombs and temples of the Nile Valley, the birthplace of the reed and the lotus and the Grecian column. The whole argument of prototype forms is a mentor which indicates in co-related stages the gradual, inevitable unfolding of thought. The spirit of the time is captured. Every architectural attempt is an epitome of its period. Every succeeding record embraces the vital qualities of its precursors—models and adapts, accepts, rejects, a process of selection—carves up the cyclopean monolith, builds up with handier stones; invents systems of measurement and values—searches Nature for embellishment; invests architecture with potter's detail and pottery with architectural ornament; introduces ivory and gold, metals and precious stones, richness added to refinement, colour and light, shade and reflection and dramatic effect, and, crowning all, brilliant and astonishing statuary. Out of earth the temple articulate is made.

The oracular Periclean period consumes the past, and threatens the future; it is the date, the millennium, of mental power, of philosophy, literature, oratory, and the base-comparative of intellectual effort.

Then Rome. The Emperor adds to the world museum and detracts from it—destroys æsthetic principle, rushed in with the arch, the vault, the dome,

characteristic of power, elastic and unstable, a gorgeous panorama of monumental buildings—gorgeous, yes, beautiful, not in symbolism, but with a pagan riotous, disturbing beauty.

The Greek had the Homeric legend; visualised his deity in battle, adored the apotheosis. In death the public hero became a public god, and inspired the sculptor with at least an official cult.

The popular beliefs shook with the Romans, who created an architecture that was politically inspired, only to become stabilised by the monotheism of the early Christians. And so the story goes on—from the Cyclops to the heyday of Roman pomp, the catacombs and the Sign of the Fish—the portrait of St. Peter, in camera. Stealthily, the curtain is rung up on Christianity. Scanning the ages, we think the old world is rather suddenly dead.

When the throne of power was transferred to Byzantium the intellectual art which we call Classic was left to trail behind. A new obscurity veils the progress of thought; there is a set-back, which echoes through the architecture of succeeding centuries; the humanism of the new religion was to work out its own salvation through devious routes—partly oriental and fatalist, wholly ignorant, dreading A.D. 1000. What had gone before was forgotten, lost in the interregnum, whose monument was the basilica, fashioned out of second-hand material, but impregnated with faith. It was a make-up built of Roman relics, and improved by expatriated Greeks. It possessed a beauty that is non-axiomatic. Failing for want of arbiter, it arrives timorous, persists, and ritualism breathes it into throbbing reality. There is no architecture so intensely spiritual.

It was a policy of divergence that caused the Church to refute the temple influence—naturally in concern for its own integrity. The basilica weaned away as speedily as possible from the heathen element in its construction and decoration, and sculpture received a deadly blow when Constantine legalised the new religion proscribing the workshop of the graven image. The Heroic Age passed the way of the Golden Calf.

A sort of democracy laid the foundation of the cathedral era. If there was little tradition to replace legend, there was altruism and allegory. Christ, Madonna, the Apostles, were reduced to symbols. The Crucifix, mechanically repeated; the Lady, naïf, often grotesque, and the curious pictorial heirarchy of the Romanesque ecclesiastics exhaust the total of Biblical influence on sculpture. So it degenerated into carving—and carving became a craft. The mediæval philosophy retarded the plastic art, forbade the nude, centralised study, reduced teaching to formulæ from the lap of Papal authority, and condemned science—only to give birth to sorcery and a clericalism once removed from priestcraft. Yet it inculcated a fanatical zeal that covered Western Europe with real monuments—a complete, abiding gamut to the glory of God and the wisdom of restraint.

Then came the pageant Renaissance, cutting across the traditional track with its individualism, patronage, and brilliant versatility. A profound intellectual activity prevailed. The influence of genius is the characteristic of the revival. A thirst for knowledge, and scientific research, subversive, anti-mediæval, and regen-



ALL PARTS STANDARDISED.

Fitted in the Principal Buildings  
Throughout Australia

Waygood-Otis (Aust.) Pty. Ltd.

4 Nithsdale Street, Sydney, New South Wales

80 Queen's Bridge Street, Melbourne, Victoria

Tyrrill Buildings, Telford Street, Newcastle



erating, it had neither hesitation nor morality. Virile and resourceful, its leaders overcame the established, if frail opinion. It was a case of new wine in old bottles. They approached nature. They converted religion into art, and antiquity into a source of information—whence a synthetic architecture, aristocratic, lacking in bourgeois sincerity, fearful of the commonplace. They created the palace—and made portraits of the prophets. Thought, learning, wealth, were dissipated in an enormous constellation of buildings; the prince was prodigal of other people's money. The Popes availed themselves of the occasions to turn to the Church's and their own advantage the works of literati, artists, and engineers. Their bastard buildings were half Roman, half modern, wholly conscious of a striving after originality, new forms of construction and treatments of material, the introduction of painters' composition, perspective vistas, and every conceivable effect. It was an age of taste, and its works were the achievements of competing schools; masters and patrons dictated and were constantly at loggerheads; pupils outshone their professors; mechanics and filigree workers became poets, painters and sculptors; copyists and artists became architects and engineers, and dilettanti flourished. It was not possible that a definite shape, nor even the true essentials of a pure homogeneous style should spring from such a fount of mixed waters.

If the Italian style was founded on the work of academicians, it is not without brilliant examples that outshone their rivals and affected the rest of Europe.

The genius of the Renaissance initiated genres which others copied, although failing to re-incarnate the real spirit.

The return of modern architecture to a sense of purity and constructional frankness is symptomatic of a much better appreciation of those lasting qualities that are the grain and the essence of monumental work. The mark of the Renaissance will fade, as the mark of the Gothic has faded. Has there been any architectural gain, any improvement? Nothing in comparison with the length of time through which the Ideal has persistently struggled. Leaping two thousand years, the Neo-Grec has flickered sufficiently brightly to light the way to a better understanding. It has clarified confusion, and shown the value of disciplined learning. It has cleared the ground for an architecture whose style shall be stimulated by the difficulties of modern needs, rid of pedantry, inspired by sanity and economy.

But is it enough that the way be clear?

The spirit of architecture has sped from Babylon to New York, from the tabernacle to the tall chimney of commerce. The cauldron of Industrialism still seethes with unnatural energy unspent, but the momentum of philosophy is broken. Once more the golden calf struts its pedestal. Wealth! The Imperialism that built Europe has smashed Europe, and the world is embittered. The church spiritual, the palace temporal, shall make way for "commodious offices."

The dumb gods shall be shattered—because they are dumb.—*The Builder*.

---

## The Aseptic Home

By Nora Robertson.

THE model home is becoming a cult. Few of us can hear it described without first experiencing a sense of guilt at the inadequacy of our own appointments, followed, if we have any spirit, by reaction and rebellion against its tyrannies. For, after all, who wants to live in a model home? And, indeed, can it be called a home at all, or is it anything in its chilly, hygienic self-consciousness but a model interior, the freak of didactic lecturers, generally well-informed ladies, who profess a monopoly as to what women want?

Armed with an order to view, let us go over one of these ideal maisonnettes in Spain. The philosophy co-relating the several parts is based upon the Idea of dirtphobia, and the Will to fittings. It is also immoral to accumulate. The bed-room contains a bed, otherwise it has no furniture, and, in its awful pristine cleanliness, so closely resembles a public lavatory that one would unconsciously leave a tip after washing in the laid-on basin. The various cupboards are fixtures, aggressively so; the dressing table, also

a fixture, slides in or pulls out when required; boots are tightly parked in a boot locker concealed under a window seat, itself "inexpensively improvised by the village carpenter." The floor is bare and polished, carpets, of course, being taboo. The angles are rounded. The door surface is flush. There is no fireplace (really model homes are communally heated). The radiator is painted white, so is the pull-out table; the walls are distempered white; in fact, everything is white except the sheets, which are crude coloured checks, "to break the insipid monotony of tradition."

Next door is the nursery. The nursery is peculiarly holy in the model home, and the details must be familiar to any visitor of recent exhibitions, where the charming notions of our young princesses are interpreted by enterprising tradesmen. Everything is the right height. There is an art frieze, no wall paper, no pictures, no corners, no microbes, and no character. We carry away the impression of acres of cork carpet, and a round table with a bowl of roses. The nursery we remember best had nothing model about it; it was

a shameless hotch-potch, and it had a patterned carpet, invaluable to a generation that played marbles, a scrap screen, a solid square table, with an ink-stained chenille cloth with coloured bobbles, and enthroned on the table the family sewing machine. The place may have been full of microbes, but good ones no doubt were included.

The model bath-room is altogether satisfactory, so much so that we deplore the day when it in turn must be supplanted by the adjustable human nozzle, "so readily affixed to the electric vacuum cleaner."

We will not dwell in the sitting-rooms; they are ingenious; nearly every article of the few pieces of furniture can do three or four other things besides the one to which we are accustomed, and the scheme is either quite without colour or jazziingly full of it. Instead, let us hurry on, and, reverently removing our shoes, explore the kitchen. Here it is that the philosophy of dirtphobia achieves its logical triumph. Everything gleams with the high light of spotless virtue. Food in its crude state, or a cook, would be an anachronism. Note the absence of the familiar centre table; instead, there is "space" and a side pull-out. There are no beloved drawers containing hatpins, "Mrs. Beeton," and the screw of the mincing machine; in their place are glazed dust-proof shelves, behind which are paraded the aluminium non-drip teapot, the hay box, mysterious chafing pans, and the other burnished surgical implements of refined non-handled cookery. Awed by the experience of our visit, we return home and contemplate.

In theory, every feature of these carefully devised

houses is logical, perfect and admirable, but the reiteration makes the sum of their achievement irritating to the ordinary, illogical human. For, even after making every allowance for the service difficulty, is there an immediate necessity to Americanise the details of our surroundings? Home to us here still means accumulations, generally traditional ones; it means compromise, it expresses the varying tastes, hobbies and moods of a family, and it cannot do all this and remain surgically clean. Probably the present aseptic house frenzy is a reaction from the fussy war of exhaustion which so many English housewives unsuccessfully wage against perfectly inoffensive dust.

If but an iota of that zeal were used to reinforce the campaign against the vile dirt of smoke pollution, the gain to society would be immeasurably great, and hours of energy would be saved. Let us preserve our homes as inherited, evolving them reasonably as the need arises. They are institutions that cannot be remodelled nearer to the heart's desire by the process of first being scattered to bits, and if, in defending their charm, we fail to keep them up as perfectly as we used, then let them rest a little dirty. The present writer, not being indigenous to this island, had never even heard of a spring-cleaning, much less submitted to one, until she left her own adjacent island. It may be unfortunately true that the matrons of England are not to be led so agreeably astray, and, after all, they have their reward; but the cleanliness that is next to godliness is a superfluous virtue in the other island that is claimed by the saints, and where among its many mansions the model home finds no place.—*The Builder*.

## KANDOS PORTLAND CEMENT



The Fireproofing Problem can be completely settled by the use of Kandos Cement Concrete for all floors, beams and piers, as well as walls. For this reason Kandos Cement Concrete is the **IDEAL BUILDING MATERIAL.**

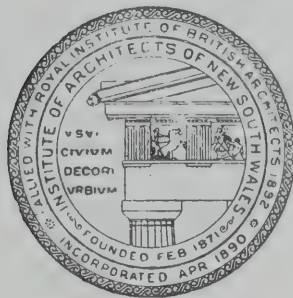
Be sure to Specify KANDOS PORTLAND CEMENT

KANDOS CEMENT CO. LTD.  
33-39 Hunter Street - Sydney  
PHONES B 6741 and B 6742



# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



DECEMBER 15TH  
1923

VOL 12. No. 12

PRICE ONE SHILLING

# MINUTES OF AN ORDINARY GENERAL MEETING OF THE INSTITUTE OF ARCHITECTS OF NEW SOUTH WALES

**Held at the Royal Society's Rooms on Tuesday, 11th December, 1923**

Mr. G. Sydney Jones was, in the absence of the President, elected to the chair.

Apologies were received from Sir Charles Rosenthal, Colonel Vernon, Colonel Spain, Professor Wilkinson, Messrs. de Putron and Somerville.

The minutes of the previous meeting were confirmed.

Mr. Bennet-Dobson, a newly-elected member being present, was formally admitted as a Fellow of the Institute.

In a short opening address the Chairman again drew members' attention to the notices on the agenda paper in dealing with the Exhibition; he asked members to be good enough to remind themselves that the Exhibition was a thing that they should take very seriously and endeavour to have something prepared to submit for hanging on the walls; he stressed the matter of more importance being attached to working drawings and details with a view to bringing under the notice of the public the amount of work that was actually entailed, as far as the architect was concerned, in designing a building.

## **Canberra Competitions.**

The following resolution submitted by Council for the endorsement of the members generally was read:—

"That in consequence of the explanation made by the representatives of this Institute on the Federal Council of the Australian Institutes of Architects, that the action of the Acting President of the Federal Council be endorsed and that the embargo placed on members of this Institute entering for any competition in connection with the Federal capital be removed."

Moved by Mr. Day, seconded by Mr. Munnings, that this meeting endorse the resolution as read. Carried unanimously.

Secretary was instructed to forward a copy of the resolution to Mr. Waterhouse for transmission to the Acting President.

Short papers on travel were read by Messrs. Adam, Buchanan, and McCredie.

Mr. Waterhouse, in proposing a vote of thanks, said that anyone who went away and brought back to this room some enlightenment on the architectural aspects in other countries for the benefit of their less fortunate brethren of the profession who have been unable to travel, are conferring a great benefit on this

Institute in particular and the profession in general; he regretted that more students were not present to take advantage of such interesting and informative talks which would have tended to hasten them in their desires to travel and see how things were done architecturally in other countries. He hoped that the examples of excellent work generally found in American buildings would gradually spread to this country.

Mr. Harvey, R.I.V.A., a visitor to Sydney, also thanked the Institute for permitting his attendance; it had given him a great deal of pleasure to listen to the papers that had been read.

Mrs. Taylor suggested that some means should be formulated whereby students could be invited to listen to such interesting talks.

The Chairman, before asking the meeting to carry a vote of thanks by acclamation, said that he was sorry time precluded him from dealing with many interesting points in the papers which he had noted, and from dealing with the subjects in a way they deserved; he considered all these were particularly interesting and well worth listening to. Carried by acclamation.

It was resolved on the voices to postpone discussion of the proposed amendments to scale of charges to a special meeting of members, the date of which was left to Council to fix.

The Secretary was instructed to include in the notice calling the meeting a statement that the proposed amendments to the scale would be laid on the table at the Institute's Rooms where they could be read by members.

## **ANNUAL EXHIBITION**

Members are again notified that the Annual Exhibition will be held from March 3rd to March 19th, 1924, in the Education Department Gallery.

Sending in day is the 27th February, 1924.

*Please make a big effort to be represented.*



## TRAVEL TALK

By J. S. Adam.

MR. PRESIDENT and GENTLEMEN,—I have been asked to contribute some of my impressions of travel to this evening's talk, and do so with mixed feelings, because I feel that some of you have been in the places I visited for a much longer period than I was, and therefore know more about them than I do. For that reason, you will excuse what may be of interest to some others.

My trip was *via* South Africa, England, Scotland, France, Italy, and the United States, but I have only made a few notes about England, Scotland, and America.

Before going further, I want to say how delightful it was to be received by busy men at the head of our profession with such gracious welcome, and to have their willing assistance in seeing things of interest. Amongst these I mention Mr. Paul Waterhouse; Professor Simpson, who took me over his new Anatomy School of the London University; Professor Atkinson, who spoke so appreciatively of some of the Australians who had worked at the A.A. in London. He thought it no trouble, and offered to go with me to Brighton, to see his new picture theatre. Sir Banister Fletcher, Mr. Austin Hall, my old school-fellow (Major Corlett), Mr. Yerbury, of the A.A., and Sir Robt. Lorimer in Edinburgh. And in America, Mr. Hamilton (Perkins, Fellows & Hamilton), Chicago; Mr. Holmes and Mr. Thompson (McKim, Mead & White), N.Y.; Gordon & Kaelber, in Rochester. These men, as well as others I met, were instances of the kindly courtesy Englishmen, Scotsmen, and Americans show to strangers. I was indeed surprised at the generous attention shown me by the Presidents and Superintendents of the huge American Department Stores, Hospitals, Schools, etc., I visited. There was no difficulty in any instance in seeing everything they had to show; in fact, the difficulty was to get away! I mention this, in case any of you may be on a similar visit. You can be sure of a good reception and kindest attention from all the men at the head of things in England and America.

I arrived in England when spring was about to don its verdant mantle—some parts seemed to be holding a dress rehearsal—and was charmed with the hedges, wild flowers, and trees. In England, the outstanding impression was the conspicuous beauty of the country, and wonderful, unending interest of London. I would specially mention Oxford and Winchester (the Town, School, and Cathedral), with their dainty relics of monastic days, which seemed to weave a web of

increased interest as one went on. Within a stone's throw of the main streets, one sees deer quietly browsing under huge old elms filled with cawing rooks, as though the haunts of men were forgotten. At Winchester there is also a new Memorial Cross to the Soldiers in the Great War (7,000)—a very beautiful cross, placed at the steps opposite the west entrance of the Cathedral.

Oxford, I regarded as perhaps the most beautiful, and certainly the most enjoyable place in England. The delight of the time there seemed too good to be true, and like a dream of unreality.

Then there is the impression created by the famous Cathedrals—there is music and colour in the very word. No doubt this is owing to the associations that cluster around them, and to the pictures they call up with a compelling sense of awe and reverence, and wordless admiration of soaring columns, and lofty arches vanishing in the dim vaulting overhead, and the wide shadowy spaces brightened by fitful shafts of light, revealing the delicate beauty of much of the detail. Beauty such as this cannot be appreciated in haste, and the visitor needs to go with something of their mood of untroubled tranquillity to fully appreciate them. To wait, and loiter round, and then come again, seemed at times to bring the golden moment when the full charm became appealing, and the very stones seemed to speak. Who could visit old St. Bartholomew's the Great, or St. Paul's, or Westminster Abbey, Canterbury or York, or any of the famous cathedrals, without feeling that they have a solemn nobleness that cannot be found elsewhere, and which makes one feel very small?

We come away with pictures dim with the mellowness of ages—arched and pillared nave, the quaintly sculptured face of monk or minstrel peering from mysterious shadows of the vaulting, the rays of light falling duskily across the aisle and shining like showered jewels on the quiet resting place of some great man.

One was sometimes rashly lured off with a guide, who gave the customary old lecturette, and always brought one back to 1923 with a thud, by concluding his talk with "Mind the step!"

I made a tour of many of Wren's and Gibb's churches, and all of them were of much simple beauty. The wood carvings of Gibbons alone were worth the visit.

Then there are the little village churches, so full of delight in Kent and other counties, such as Leigh,

Rushall, Speldhurst, Penshurst, Cranbrook, Frant and Groombridge, and St. Martyn's, Canterbury. Also some modern parish churches, so full of refined character, such as Bentley's R.C. Church at Watford, built of flint and freestone, and all set in beautiful surroundings of such green as I had never seen before, with the trim neatness of garden and hedge.

One was also attracted by the modern buildings of London; the vicinity of South Kensington full of interest; the quaint old by-ways of London; the Chartered Accountants' Building (one of Belcher's), in Morgate Street; the business premises of Spicer Bros., Blackfriars; the new Water Board Offices at Roseberry, etc.; the Port of London Building, with its clever planning and strongly effective treatment and fine internal finish in "Serbiaco," a species of marble, soft in texture, delightful in tone, and good for carved detail. This was also to be seen in the County Council Building, the "Bush Building," and several other interiors.

Then there was interest in the re-built part of Regent Street and Oxford Street, with the fine shops of Dickin & Jones, Peter Robinson's, and Gallerie La Fayette, which were indeed worth seeing; but here I venture the opinion that we have, in Sydney, shops which could in some ways bear very favourable comparison.

There were impressions other than architectural in London. The courtesy, expressed in a manner which cannot be described but peculiarly delightful. The wonderful policeman, who controls the traffic as if by magic. I saw the whole traffic held up in the Strand, one day, and on looking at the corner saw the policeman wheeling a pram across the street for a woman.

Then the intricate perfection and cleverness of the tube system, whereby one may, by changing at the proper point, get to any other station, whether on the same system or not! That is, if one is alert and gets out quickly!

Nor would I omit the useful motor 'bus, with its unfailingly courteous conductor, second only to the policeman in his knowledge of places, and ability to describe locations.

Impressions! They are many indeed!

As one looks at the ruins of the ancient Forum, and tries to realise the place mighty Rome had in the world's history, or walks along the splendid roadways near the Louvre, and takes in the noble spaciousness distinctive of Paris, or the Waterways of Venice, one is filled with admiration. Again, on the historic roads of Edinburgh, around the entrance to the Castle and towards Holyrood Palace, or in Princes Street, with the view of frowning, battle-scarred, fortress

crowning the rugged summit, or from the top, looking down over the parapet to the wonderful picture of the city. Oh, stands at St. Giles' Cathedral, where Knox thundered and shook Scotland, or at the High Street joining Canongate, and views the picturesque house where he lived. The rock-set Arthur's Seat, with its look-out, and over to Holyrood Palace, and its interesting ruined chapel, not beautiful, but rich in associations, and now fallen into disuse. The State apartments, however, are, it is said, to be renovated, and the King and Queen propose to stay there for a time each Summer. A touch of modern architectural beauty arrests one outside the palace, in the handsome wrought-iron gateway, and statue of the "Peacemaker" by Gamley, erected in honour of the late King Edward. Edinburgh is indeed a city of hills, surrounded by seven other hills, jewelled with noble spires and monuments, palaces and towers.

The old town is in strange contrast to the new, for in the one are narrow streets and confined spaces, while the new abounds in wide spaces and magnificent prospects, with plenty of evidence of its reputation as a centre of Education, Literature, and Art.

I had the pleasure of being introduced to Sir Robt. Lorimer, and shown over the Academy of Arts by Mr. John Begg, who has charge of the architectural section.

I saw some fine examples of the art of Robert Adam in George Street, and the modern Royal Chapel of the Order of the Thistle, a beautiful work by Sir Robt. Lorimer, peculiarly rich in heraldic carvings.

Wherever one goes in Edinburgh, the fortress of historic times, which has sustained a score of sieges, looms up.

The Esplanade has been widened and levelled, and is the situation of several memorials erected by regiments that have been in garrison there. One which was not yet unveiled was, I believe, an equestrian statue of Earl Haig.

The Drawbridge, Moat, and outer gate lead one to the steep and winding way past numbers of interesting tablets and features to the windy summit, where stands St. Margaret's Chapel, a little Norman building; while in front of it is the battered form of "Mons Meg," the great cannon, said to have been forged at Mons in 1485.

The Palace is beyond, with its interesting collection of Scottish weapons and munitions, also the Royal apartments.

There is a scheme proposed for erecting, on the west and southern sides of the square, a National Shrine and Museum, in honour of the Scottish soldiers and sailors who fell in the Great War.



Of the country in Scotland, a whole evening would not be enough to describe it.

The grand beauty of the Scottish Lochs and mountains, the queer, black-faced sheep, with their long, flouncy wool, and the shaggy mountain cattle. The quiet, hospitable Scot, whose home is a home indeed, full of all that is good, recall glad memories.

In the County of Ayr, I had the experience of preparing a specification for repairs to property generally which belongs to me—the notes taken in a cold, cold wind, amid bare trees. Subsequently, I went back to see the work, when the whole place seemed to have been visited by an arm of fairy transformers, for spring had come!

I have, if possible, a higher regard for the Scot than previously, for I had the pleasure of meeting some of the best in their own homes.

Two things, which I was not fully prepared for, struck me in my trip in the U.S.A. (1) The goodness of the men at the head of things in giving their time and showing one over their buildings; and (2) the enormous volume of business being done, and the evident great richness of the cities. I was prepared for seeing tall buildings, but had associated them only with New York.

Tall buildings are to be found in many other cities besides New York, even in cities less important than Sydney.

Interesting to note the rise in rents from about the 12th floor up.

I came to the conclusion that there is no reason why a tall building should not be as artistically treated as a low one; that is, in buildings proper, as against what are virtually towers. Many I saw in New York and Chicago were very large, and effectively treated—some particularly so—especially those on the simplest lines. They look large, of course, but it is surprising to find they do not give the impression of being monsters, or out of scale. Rather, they looked fine. The effect of the tall building depends altogether on the ability of the architect to handle it, just as in any other building.

They did not give anything like the gloomy effect one expected in the comparatively narrow streets—even in Wall Street, which is little wider than our Bond Street.

These tall buildings have, of course, an independent pumping plant, ready always, electrically driven, and automatic in action.

All the tall buildings I saw being built were steel frame, with floors of reinforced or arched terra cotta.

This, presumably, is on account of the economy in space obtained for the vertical members by the use of

steel frame, not to mention the saving of time in construction.

The way a steel frame building is put up is an eye-opener—the deft way in which the different pieces are handled, from the time they left the street level till they were in place, and the way they are fitted—girders, joists and stanchions built and simple, of all lengths, fitted like a piece of joinery, with joints close and true on 13th floor, just as they were on the ground floor.

It has been said that architecture is frozen music, and that if so, the Woolworth Building must be Sister Mary Jones' top high-note!

The Hotel Pennsylvania, 7th Avenue, between 23rd and 33rd Streets, has 2,200 rooms and baths, an area of 46 acres floor space, 27 storeys, three being below street; dining-room 142 ft. x 58 ft., plumbing pipe system 111 miles, 26 elevators; guests per day, 2,800-3,000, and 2,2500 employees. Keyhole of every door is above the knob, so as not to have fumbling to fit the key in the shadow. Ice-water circulating in every room, from distilled water. Ice manufactured on the premises. A dainty writing-desk in room, stocked with pens and ink and paper, calendar, Bible, telephone pad, doctors' card, city maps, library catalogue, shoe catalogue, etc. The shaded reading-lamp to every bed is, of course, everywhere. The pin-cushion on dressing-table even includes trouser buttons, and needles *threaded* with black and white cotton. Walls are a soft neutral tint, with framed pictures in good taste. Bathrooms, with fine hot-water supply, and no pipes visible. The "Servitor" is an interesting detail. Sides of each guest room door are slightly convex, bulging out like a barrel, and inside a concealed cabinet for clothing to be pressed or for the laundry. These articles are returned without intrusion on privacy of room, or need for tip. You 'phone the office, and the "Servitor" does the rest. Meals on roof garden, 256 ft. above the street, amidst lovely profusion of flowers, and panoramic view of New York. No dust, no noise. They have an hotel daily newspaper, a swimming pool, and Turkish baths and library.

Ventilation is made a feature. A space worth 30,000 dollars a year is devoted to the outlet and intake apparatus. The air three storeys under the street is as pure, or purer, than that of the street. The air is pumped through huge ducts, and is first filtered, washed, sterilised, and heated or cooled—the hotel uses 125 tons of ice per day.

The garbage incinerator costs practically nothing, being fed from waste paper, cardboard and rubbish got by gravity from rubbish chutes on all floors.

Tipping has been reduced, and was not at all what I had been led to expect.

"The Belmont," "Biltmore," "Commodore," and "Grand Central" are all on the same lines; all having a great lobby, restaurant, banquet and ball room, reception hall, and are mostly beautiful, and all convenient and luxurious.

Rates, five dollars to ten dollars. Suites, sixteen dollars.

I saw the Bellevue Hospital, N.Y. (McKim, Mead and White), Municipal and St. Luke's Hospital, Chicago, where a good deal of "Vitrolite," a plate glass whitened at back, is used for wall lining, table-tops, etc.

Beds are all higher than in use here—to make it easier for nurses. Very large X-ray establishments. It seemed incongruous, that with the lavish care and expenditure on finish, they take a stranger just off the street through operating rooms in full use!

One wing of St. Luke's is for private rooms, arranged, in some cases, with one or two rooms and bathroom as a suite for use of relatives. This is a great convenience, though from a medical point of view is not always an advantage. Corridors all have rubber strip for quietness. Floors generally were of Terrazzo, cupped up to wall, and a carpet square provided in the patient's room, which again seemed strange. Patients pay 13 dollars a day, inclusive of everything.

I must say, I admired the great Royal Infirmary at Manchester, more than any hospital I saw in the States.

Very fine water supply for the public places, libraries, trains, etc.; good iced water, and paper cups.

In the New York Public Library, a noble building of McKim, Mead and White's, there are hot-air drying machines, instead of towels, in the public lavatories. Where towels are used in public places, they are of paper.

The factories, schools, and churches are frequently placed in a well-kept garden, or grounds laid out in lawns.

The hospitals, etc., do not publish annual reports, or take photos., as they consider by the time they were printed they would be out of date!

In one factory I saw this motto in the hall: "It takes 64 muscles of the face to make a frown, and only 13 to make a smile. Why work overtime?"

The American stores are, of course, bigger and more striking than those of London; though the newer premises of John Barker's, of Kensington, is a very spacious place, a large section being devoted to sale of food and provisions under ideal conditions, in which glass, marble, and porcelain are used extensively—the glass shelving, all detachable for cleaning, is very attractive. A special feature is the roomy entrance and

lift hall, well-furnished lobby and reception lounge—comfortable settees, where customers may rest and wait, and a very comfortable series of telephone rooms, perfectly private. The restaurant is tastefully furnished and decorated, and has exceptionally good writing-rooms, library, etc., for women, and smoking-room for men, all finely furnished. The engine-room in the basement is most complete, with latest oil fuel boilers, generating steam, and electric power for the ventilation, pumping, vacuum plant, etc. Water is pumped from two artesian wells sunk 450 ft. below the basement, each of which supplies 10,000 gallons per hour. There is also a separate supply from the street main for fire purposes.

The new "Bush Building" in London has a similar plant in the sub-basement, with five oil-engines pumping their own water supply, and supplying all the other power used.

Several London modern stores are on American lines. The Galerie La Fayette is much more richly decorated and luxuriously fitted, but here, and at the Louvre (London) the fittings are too crowded, and the traffic was fearfully congested. This mistake is never made in America, where passage-ways are 9 ft. and over.

In Paris, the shop-front fittings are very elaborate, but not always so effective for displaying goods as in the plainer treatment.

It will be interesting to see how Liberty's new building will turn out. It is on the lines of the half-timbered fronts of old England.

In New York, Tiffany's and Gorham's (jewellers) are both beautiful buildings; the former is one of McKim, Mead and White's designs.

The stores make great use of galleries round ground floor, using the space for enquiries, public telephones, watch repairs, lost-and-found office, optical work, and offices of superintendent, etc.

At Lord and Taylor's Store is an interesting innovation, each show window being practically a hydraulic lift, which lowers into the basement, and is run off on a set of rails, while the newly dressed front is run up in position in a few minutes. This is a novelty, generally considered unnecessarily costly for the advantages gained.

All the stores make large use of spiral chutes from top to bottom for parcels, where travelling belts deliver the parcels by branch belts to the sections immediately opposite the dock, where the respective electric motor vans are drawn up. There is remarkably little handling, even the weighing and stamping parcels for post being done by machines; the packets then passing on to various baskets ready for the mailman, and all automatically sorted for various districts.



The welfare departments are being developed into huge affairs, providing for the employees most comfortable rest rooms, dining rooms, kitchen, library, doctor's and dentist's rooms, bathrooms, chiropodist's rooms, and the separate branch for educational work for employees.

Much is made of the refrigerating rooms for storage of furs, giving capacity for 3,000 pieces, at a temperature of 32 degrees. The blower rooms, for cleaning furs before storing, are, in themselves, full of interesting contrivances for obviating dust, etc.

The stores use a very clever little instrument for checking a customer's credit, which is done in a few moments, without delay or sound.

It was interesting to see how the improved escalator is used. At Macey's, in New York, where there are twenty-four lifts, besides staircases, they have two escalators on ground and first floors, which have moved 9,000 people per hour.

The dining-rooms for the public are quite large places, that at Macey's seats 2,500, besides a grill-room, and a counter-lunch branch.

The dining-room at Marshall Field's holds 5,000, where the kitchen employees number 630.

The employees' Cafeteria seats 4,000. This building has 50 acres of floor space, with 8,900 employees. The separate building for men's clothing has a restaurant for 750. In the boot department is an interesting machine, on which you stand and look through an aperture and have an X-ray view of your foot, showing bones, flesh, and shoe complete. Their telephone department has 100 incoming trunks and 45 outgoing.

All the big stores prepare and cook their meat, vegetables, fish, soups, make their bread, ice-cream, etc., and run a large laundry for their own use and for special classes of work for customers, and they do their own printing.

At Macey's, I saw a lift, about 25 ft. x 13 ft., which takes a waggon up to the 7th floor, where it is loaded with furniture and lowered to the dock, where the horses are attached.

At Bamberger's, at Newark, New Jersey, they have 17 lifts, and two escalators from 1st to 6th floors. I was told, that between December 11th and 16th last, these escalators carried 33,100 persons. Their trouble is, that there are on an average 3,000 cars at their doors per day, and as there is no parking space handy, they are about to erect a huge garage for parking customers' cars, with a telephone system, whereby customers may call them up at no cost to themselves.

At several stores I noticed there were no window-backs or enclosures to shop windows, but an Architectural

treatment of balustrade in Caen stone. This looked well, and was a great gain in daylight. I was told there was no trouble with dust, but they have good roads!

It was interesting to note, that a special branch of the correspondence work is provided away from all the rest, where a few trained college graduates write letters requiring great delicacy and diplomacy.

Just a word about factories. I went to Rochester, and other places, to see some. The best of them are always set in a garden, or park, which is well kept and provided with tennis courts. Employees use them, and can hold dances in the hall, inviting their friends. The Clothing Factory of "Fashion Park" has 250,000 sq. ft. of floors, and 2,700 employees—not very huge, but most complete.

Hickey Freeman's factory also is a beautiful building, of five floors, for 1,600 employees; each room about 160 ft. x 60 ft., with some 190 ft. x 40 ft. There were no columns. I was told, a male employee earns 38 dollars per week, and a female 35 dollars.

The amount of attention paid to ventilation was an outstanding feature at all the stores and factories; the washing, cooling (or warming) of the air being done quite simply and effectively.

Time will not permit further notes on such buildings as the Bowery Savings Bank, N.Y.; The High Schools; Cunard Building, N.Y.; Wesleyan Building, Chicago; Fairmont Hotel, San Francisco; Edgewater Beach Hotel, Chicago; Guaranty Trust Building, N.Y.; Pennsylvania Railway Terminus, N.Y.; The Eastman Theatre, Rochester, and others, but should any of you be near the latter be sure and go over it, and the school of music adjoining. It was presented to the city by Eastman of Kodak's, and is very successful. Gordon and Kelber, the architects, kindly took me all over, and subsequently posted me a set of blue prints. This is one of the instances mentioned before of the kindly feeling many Americans have for Australians.

To talk of the scenery by the Rock Island and Pacific route, Niagara, etc., is another topic, but not for to-night.

I admire Chicago as a great centre of supply and distribution, it has a population of 3,200,000 in the Civic Zone, and has spent and is spending enormous sums on harbour development and freight terminus. The method of handling large traffic on ferries at San Francisco was illuminating. The method of preventing streets being constantly torn up in New York was as greatly in advance of ours, as their police control of traffic in the street, is behind that of London.

A call at Pago-Pago and Honolulu gave the final

impressions of foreign places, and the latter is a place where a good holiday could be spent amidst beautiful and uncommon surroundings.

I returned feeling it was good to be an Australian, for everyone seemed to like them—good to be a member of the Empire, whose greatness one can only truly estimate when one has travelled, and I returned fully convinced that there is no place to live in as good as Australia. I came back prepared to do a

greater part in returning the courtesies to British and other visitors one may meet. Little attentions mean so much to a stranger only fully appreciated by one who has experienced the goodness of others in this direction.

By travel one gets a truer estimate of things, and feels better equipped for the endeavour to make our country worthy of the grand traditions of the old world and the ingenuity and latent talent of the new.

---

## “TRAVEL TALK” ON CANADA AND AMERICA

Before the Institute of Architects of N.S.W., 11th December, 1923.

By S. H. Buchanan.

THE use of travelling is to regulate imagination by reality, and instead of thinking how things may be—to see them as they are. Travel raises the understanding to the level of intelligent appreciation.

These sentiments forced me to realise that the greatest asset an architect could possess would be a store of knowledge, gained by travel, observation and personal inspection.

Finding I could not afford the time required for a whole world tour, I decided to visit Canada and the United States of America, with a full determination to read, mark, learn and inwardly digest all that concerned architecture and building in the New World.

My itinerary was well-plotted on map before leaving Sydney—and as I travelled by plan and to schedule of dates—my whereabouts could be followed and located at any day during my absence from Sydney.

The trip from Sydney to Vancouver, B.C., takes approximately only twenty-one days, and *en route* the traveller views many interesting parts of the New World, and passes through very varied climates.

Travel in Canada and U.S.A. is made very easy and comfortable on account of the service and sense adopted by the Railway Companies, which are private enterprises, and the hotel accommodation offered. Baggage is especially well catered for.

The “Glad-to-know-you” feeling, and “Is-there-anything-I-can-do-for-you” of the American architects, builders, and, in fact, everybody, gives you an impression of welcome and pleasure, that enables one to ask questions and gain information.

My tour included twenty-two cities in Canada and America, and in the time allowed for this “travel talk” it will be impossible to go into details, and, therefore, I propose to mention only a certain number of

points of interest, taken at random from my notes and which are a little disjointed, as the preparation for same has been limited.

The architecture of Canada and America embodies suitability, strength and beauty, and they follow the classic ideal.

Taking the West Coast of U.S.A., including Seattle, Portland, San Francisco, and Los Angeles, one finds architecture most applicable to the Australian conditions, on account of the climate and conditions generally being similar.

The civic centres, State capitols, public buildings, departmental stores, office blocks, banks and hotels, are full of sane planning and design.

The residential sections are kept as such, and the omission of our usual 6 ft. division fences and backyards add 100 per cent to the general appearance.

In all American residential designs the semi-base-ment, usually about 7 ft. ceiling height, takes the place of the back yard, and cares for laundry, etc., thus making each home appear to be set in a garden.

Streets are planted and paved, and contain water, sewer, gas, electric light, hot water, refrigeration mains, and, in many cases, running water in street gutters.

The snow-capped coast ranges on the West Coast supply ample water for all purposes, and contain the Oregon and Redwood forests, which timbers are well known here.

The most recent addition to the civic centre in San Francisco is the State Courts (architects, Messrs. Bliss & Faville). This building, about 500 ft. x 100 ft., is designed in Italian Renaissance, has an 8 in. camber in the roof, and also an 8 in. swell on the plan, and when inspected from the angle gives the appearance of the front wall being out of plumb. In conversation with the architects, I was informed that



the Greeks adopted this method in buildings where long elevations existed.

The public buildings are executed by private architects won in competition; and in some cases suitable architects are appointed direct, by which method excellent results are obtained.

The Universities are often designed in one style, such as Stanford University, which is "Romanesque," although different architects execute separate sections. The system of girls and boys working together strikes one as being a different custom from Australia, and in these colleges and universities there is an honour system worked by the students.

The Grecian open-air theatres and stadiums are always featured.

Modern American architecture owes much to the Beaux Arts' insistence on axial plans, possessing merit of reason and logic; and the school is very popular, and supported by leading American architects.

As modern conditions and customs change, a noticeable difference in the design and construction of buildings is also very evident.

The hotels are designed without public and private bars; provision is made for airships on flat roofs; the parking of cars has created a type of building, with staggered floors and ramps, for access, that garage hundreds of cars; the skyscrapers are vast structured and engineering problems, and, in some cases, are surmounted on the flat roof by a church or club premises. Another type of building is the Film Building, embodying absolutely fire-resisting construction, with special screening rooms and strong-rooms.

In the Woolworth Building, in New York City, the impressions are elements of mass, light and shade, material, scale and stylistic derivation. The entrance lobby has stone corbels with caricature portraits of the owner, architect and builders. The rubber-neck guide informs the visitors that it is necessary to move the two top floors to let the moon go by.

The American Institute of Architects' New York Chapter scale of charges is 6% for large work; city houses, on the first \$50,000 8%, and on balance 6%; residential work, on first \$50,000 10%, and on balance 8%; alterations, 10%; and special works, 15%.

The Institute of Architects in New York has its own building, and also contains architects' sample-rooms, with a permanent exhibition of all the latest patents and materials on show, where the architects may take their clients and inspect a choice of bricks, roof covering and floors; and all the latest improvements can be explained. The large floor spaces are divided into areas of about 10 ft. x 10 ft., and every commodity in the building world industry is represented there.

In Los Angeles the sample-room is controlled by a young lady, and each firm has its representative in attendance.

The Secretary of the New York Chapter, Mr. R. H. Shreve, of Career & Hastings, architects, expressed his pleasure at meeting me, and escorted me through their office. I also inspected the offices of McKim, Mead & White, which has quite an atmosphere of activity and a wonderful reputation. Mr. White is the artist, Mr. McKim the architect, and Mr. Mead the business man. The combination has proved itself to be successful, by the many architectural gems to be seen in the East, carried out under their direction.

The office of Albert Kahn, in Detroit, was one to be remembered. It contained 125 draughtsmen, including experts in all branches of the profession. This gentleman has quite the largest single practice in U.S.A., but he found time to take me to three very interesting buildings: *Detroit News*, 10-storey Garage Block, and Library at Michigan University, Ann Arbor.

A new branch of the profession is conducted by F. W. Fitzpatrick, consulting architect, of Chicago. He does not practise, but prepares designs and advises other architects.

The Art of Acoustics has been scientifically studied and applied to all public buildings, and the results are remarkable. Banks, public buildings, office blocks are quite free from noise, and employees are not disturbed; theatres and auditoriums are treated so as to obtain the best results for speaking and music. Gustavino tiles, made specially for acoustic results, are used for internal facing, and many large domes are erected without any centring or scaffolding, and finished with artistic effect.

The Mormon Tabernacle, Salt Lake City, is a wooden structure, 250 ft. x 150 ft., and has wonderful acoustic properties, but was a failure until the galleries were introduced. They were placed independently of the main walls, 3 ft. distant, which allowed the sound to travel behind same. It is stated that the founder of the Mormons (Brigam Young) had nineteen wives and fifty-two children. I did not hear how many mother's-in-law he had.

The New Stock Exchange (New York), Post and Telegraph Buildings, and new Federal Reserve Bank use electric light in lieu of light areas.

Museums provide a great feast for students. They contain full-size plaster casts or models of the many Grecian and Roman buildings. The models of Notre Dame, Paris, and Grecian Parthenon are on raised platforms, to enable one to walk inside and see the interior finish, which is just as complete as the exteriors. The Field and Art Museums in Chicago

are particularly interesting, as the Field Museum forms a central feature for the Lake Shore improvements. The architects—Graham Anderson, Probst, and White—allowed me to examine the plans, and also explained several other Chicago improvement schemes which were on a vast scale.

The basements of all buildings are extended under the footpaths, thus obtaining excellent light from the patent pavement lights; and the basements are made just as valuable as the ground floors.

Ventilation schemes and filtered iced-water installations are always embodied in contracts, and no building is considered complete without these factors.

The air in the theatres, business offices, and public buildings is so regulated as to remain at an equal temperature of 69 degrees Fahrenheit, and before the air obtains entrance to buildings the air is washed and so purified as to be purer than the air in the streets.

What would ordinarily be considered the "almost impossible" has been achieved in the Denver Auditorium, which was designed as a large auditorium to seat 12,000 persons. This large area can be converted by lowering a movable steel frame proscenium, weighing 100 tons. By this arrangement a modern theatre and smaller auditorium are provided. The galleries are hinged, and, when in position, form the usual theatre plan, and comply with the Theatres' Building Regulations. The exits are arranged so that 12,000 persons may leave their seats and be clear away from building in the space of seven minutes.

The Carnegie Steel Works, Homestead Plant (Pittsburg), is, like most American undertakings, on a very large scale, 12,500 men being employed. A river divides the Works, and 70 miles of railways are laid to convey the molten ore across the river from seven furnaces to the rolling mills. Five hundred tons of steel are produced every twenty-four hours. With mills such as these, structural steel work is made economically possible; and, therefore, reinforced concrete is not so evident as one would surmise. Visitors to this plant have to sign an undertaking that they visit same at their own risk.

The Federal Reserve Bank, New York, cost 18 million dollars, and was a three-years' contract. There are four floors below the footpath, equalling 80 ft. in depth; retaining walls and foundations are 8 ft. thick. There are 20-storey buildings surrounding the site; so you can imagine there is some element of danger to keep these buildings from slipping, with excavations of 365 ft. long and 100 ft. deep.

The elevations are designed in Renaissance, with five varieties of stone, which contain many veins and birthmarks, and give quite a good texture.

The Universal Cement Co. Buffington Plant,

Chicago, employs 2,000 men, and turns out 20,000 bags per day. Bags weigh 9.4 lbs., and the bags are made out of white duck cloth. The slag cement is generally used, and is made from the slag obtained from the steel

The foundations found in Chicago, which consist of a sticky-grey clay, must add a big percentage to building costs. At the new Methodist Temple I saw cassettes put down with iron bands and 2 in. pine timbers, 90 ft. below the footpath, then concrete footings from rock or approved foundation, to basement-level, iron shoes, and then the steel construction was started. Another unusual procedure was noted at the new Illinois Bank, Chicago. The first basement was excavated, and concrete floor completed; then the steel-work, brick walls, and stone-work started, and many floors above the footpath were under way. On inspection, I noted that the sub-basement was only just starting to be excavated. This procedure could only be adopted where soft clay foundation existed.

The recently erected Parliament Building in Winnipeg, Manitoba (Canada), demands special mention. The architect, Frank Symons, of London, was the successful competitor in this open competition, and his efforts are repaid by the production of this magnificent building.

In conclusion, I thank you for your kind attention, and hope that this hurried and disjointed review of part of my travels may recall much of the New World to those who have preceded me, and stimulate the younger members to go and do likewise.

Throughout the whole of my tour in Canada and America I was pleasurably surprised to find, that once my mission was explained, those who were previously strangers became enthusiastic and generous friends, and did all in their power to afford me every information and unrestricted insight into their wonderful country.

To acknowledge and express gratefulness for the self-improvement and confidence gained in my tour, is the very least tribute I can pay to those who have done so much towards the national success of Canada and America.

### THE COMMON ROOM.

The COMMON ROOM at the INSTITUTE OF ARCHITECTS is available for Arbitrations, Consultations and the like.

*Terms on application to the Secretary.*



## VISIT TO PORT KEMBLA

THE President of this Institute, Sir Charles Rosenthal, F.I.A., F.R.I.B.A., took a party of its members to visit the Works of the Electrolytic Refining and Smelting Company of Australia, the Metal Manufactures Limited, and Australian Fertilizers Proprietary Limited, at Port Kembla, on Friday, December 14, 1923.

The party was accompanied from Sydney by Mr. Kelso King, Mr. P. V. McCulloch, directors of the above companies, and Mr. V. H. Green, business manager of the Australian Fertilizers Proprietary Limited, and was shown over the various works by Mr. E. A. White, manager, and Mr. F. H. Rickleman, works superintendent of the Electrolytic Refining and Smelting Company; Mr. J. P. Caddy, assistant manager, Metal Manufactures Limited; and Mr. R. J. Craig, works manager, Australian Fertilizers Proprietary Limited.

The three works, although separate companies, are closely associated. They are all operated by electricity, which is generated by a central power station at the Electrolytic Refining and Smelting Company, which has a capacity of 3,000 K.W.

#### Electrolytic Refining and Smelting Company of Australia Limited.

The Electrolytic Refining and Smelting Company, the parent company, started operations in 1909, with a capacity of 1,000 tons of copper per month. It has been extended from time to time until the capacity is now 3,000 tons per month, and is the largest copper refinery in the British Empire. It is conveniently situated to both water and railway freight, and also to a good coal supply from the South Coast coal mines.

The copper, copper matte, and crude ores containing copper, gold and silver are supplied from mines all over Australia.

All material coming into the works is carefully weighed, then passes into the sample-mill, where samples are taken to determine the metal contents. The crude ore passes on to the smelter department, which consists of two blast furnaces, and one reverberatory furnace, and two converted stands.

The ore is smelted in the blast furnaces, producing a copper matte, containing the copper, gold and silver, which passes on to the converters, which convert the matte to blister copper containing the gold and silver.

The blister copper then passes on to the copper refinery, where it is melted in the anode furnace, together with other blister copper that is received on the works from other parts of Australia. The blister

copper, after melting in the anode furnace, which has a capacity of 120 tons per day is cast to anodes (weight 500lb.) by means of a Walker's casting wheel. The anodes are weighed and then pass into the electrolytic refinery (tank house), a building 720ft. long x 120ft. wide, containing 824 electrolytic cells or tanks; the anodes are placed in these tanks, which have a capacity of 5 tons; here the copper is refined by electrolysis, the copper being deposited on a cathode, per medium of an electrolyte containing copper sulphate 14 per cent. and free sulphuric acid 12 per cent., the gold and silver not being deposited with the copper falls to the bottom of the tanks, where it is extracted in the form of a slime, and is sent to the gold and silver refinery for separation and refining.

The copper cathodes are extracted from the tanks at a certain period, and sent to the wirebar furnace, where they are charged by means of an electric charging crane with a capacity of 100 tons per hour; the cathodes are melted and cast into wirebars, ingots, slabs or special shapes as required by the trade.

The marketable copper produced has a purity of 99.93 per cent., and is equal to any in the world. The gold and silver is refined at the gold refinery, which has a capacity of 15,000 ounces of gold and 100,000 ounces of silver per month of metal going over 999 parts per 1,000 fine.

#### Metal Manufactures Limited.

These works consist of three main departments, viz., Wire-drawing Factory, Tube Factory, and Telephone-cable Factory.

All the copper used by this company is received from the Electrolytic Refining and Smelting Company in the shapes required.

The *Wire-drawing Factory* has a capacity of 800 tons per month of finished wire, and consists of rolling mills, where the wirebars are rolled to  $\frac{1}{4}$ in. rod, 700ft. long. From the rolling mill it passes on to the wire-drawing machines and is drawn into wire of different gauges.

A large percentage of the wire is drawn into what is known as post office wire, and is used for overhead telephone wires; this is drawn on special machines, and is of the highest quality possible to produce, being to exact gauge, weight, and of the required electrical conductivity.

In addition to the machines for drawing post-office wire, there are tandem machines and smaller machines for drawing the wire to a very fine gauge. Much of the wire from the tandem machines is made up

into bare cable of various sizes; this is carried out on the stranding machines.

There are also cotton covering machines for putting a cotton insulation covering on the wire.

All the wire as it passes from the machines is wound on wooden reels; these reels pass from the machines to the warehouse where they are weighed, tested, and got ready for shipment.

The *Telephone Cable Factory*.—This department has only been in operation for a few months, being a new addition to the company. The manufacture of a telephone cable is a very intricate and delicate process. The copper wire used is drawn in the wire-drawing department to the required gauge, and on passing into the telephone-cable factory is first covered by wrapping with a special paper, cut into strips of from  $\frac{1}{4}$ in. to 4in. There are three different coloured papers used, red for positive, white for negative, and purple for the pilot wire.

The red and white covered wires are put into pairs, the pairs are then grouped in tiers to make up a cable which may contain 400 wires all wrapped together. A pilot wire is placed in each tier, so that the position of any pair of wires can be determined by its relation to the pilot. This is used in connection with locating the various wires in the cable from different ends. Thus if a mechanic is dealing with a pair three to the right of the pilot at a given station, another mechanic miles away can pick up the same pair when the position is telephoned to him.

The paper-covered cable is finally covered with lead by passing the cable through a hydraulic press of very high power, which squeezes the lead round the cable and then passes it through a die which makes the lead coating and the cable to the required diameter. These cables are used for underground work, the lead coating serving as an insulation against water, insects, etc.

Very delicate instruments are used to test the cable after it is manufactured to make sure that each wire in the cable is insulated from the others, and also to see that the copper cable is insulated from the lead coating. The cable is wrapped on to drums and made ready for shipment.

*Tube Factory*.—The tube factory is a building 300ft. x 320ft., in which the piercing machine and draw-benches are placed, also the brass casting furnaces and the tin-coating plant.

The copper billets required for making the copper tubes are cast by the Electrolytic Company, and are delivered in sizes from  $2\frac{1}{2}$  inches to 6 inches diameter and approximately 4 feet long.

The billet is pierced in the piercing machine, and the hollows are drawn out on the various draw-benches; tubes of any size from  $\frac{1}{6}$ in. to 12in.

diameter and of any thickness and length can be drawn.

In addition to copper tubes, brass tubes and rods are made to any required dimension, or in any section. The composition of the brass being usually 40 per cent zinc, 60 per cent. copper.

All tubes are of the highest quality; only pure copper and zinc being used in their manufacture. Every tube manufactured has to pass a very rigid test—all defective tubes are rejected and sent back for remelting.

All the products of the metal manufactures, which consist of copper rods, bus bars, strips, bare and covered wire, bare cable, covered cable, together with the copper and brass tubing, are of the very highest standard; the first consideration of the company is to produce a finished product, equal to, if not better, than the products of all other manufacturers.

#### **Australian Fertilizers Proprietary Limited.**

These works have only been in operation for about three years, and differ from Metal Manufactures Limited and the Electrolytic Refining and Smelting Company in that they are not handling a metal, but produce what is commonly known as superphosphate.

The plant is divided into two sections, the acid plant and the superphosphate shed.

The two important ingredients used in the manufacture of superphosphate are sulphuric acid and phosphate rock; the acid being used to digest the phosphoric acid in the rock, and make it soluble and available to be taken up by the soil when mixed with it.

The sulphuric acid is manufactured from sulphur, or the sulphur contents of certain classes of sulphide ores; sulphur gas being liberated by burning the sulphur in rotary furnaces, the gas passing into lead towers, where it becomes mixed with nitric oxide gas, thence passing into the lead chambers where it comes into contact with water in a very finely divided form, such as a mist. The contact of the gas and water produces sulphuric acid, which deposits on the bottom of the chamber, and is drawn off into the storage tanks.

The phosphate rock, which is imported from Nauru Island, is first finely ground, and then passed in certain quantities to the mixers, which are situated in the superphosphate shed; it is here that the sulphuric acid is added. The crushed rock and acid is mixed together in the centrifugal mixer for a certain time, the charge is then drawn off, and run into the "dens," where the action of the sulphuric acid in the phosphate rock is completed. When a den has been filled and allowed to stand for the required time, it is then excavated by means of a mechanical cutter, the



material then being in the form of a powder is delivered to an elevator and passes along an endless belt to the storage shed.

The storage shed, which is 465ft. long and 120ft. wide, has a capacity of 20,000 tons and contains all the bagging units. The superphosphate from the storage heap is delivered to the bagging units by means of an overhead 5-ton electric crane, to which is attached a 2-ton clam grab.

The superphosphate is bagged, carefully weighed, and loaded into trucks for despatch to consumers.

#### The Luncheon.

The company gave its visitors a luncheon in the officers' club room, where the Electrolytic Company's Honour Roll of 78 names of soldiers in the Great War was noted; that number was 15 per cent. of the employees at that time.

At the luncheon Mr. Kelso King welcomed the party, and Sir Charles Rosenthal replied. Sir Charles expressed hearty appreciation of the welcome, and of the interesting visit, and insisted upon the importance of such industries as that of the Port Kembla E.R. and S. Company in making Australia self-reliant and self-contained in the event of any future emergency.

The following ladies and gentlemen availed themselves of the opportunity to make the visit: Sir Charles Rosenthal, F.I.A., F.R.I.B.A. (President, I.A.N.S.W.), Mr. R. O. Brown, F.I.A., and Mrs Brown, Mr. A. E. Colman, A.I.A., Mr. R. G. Craig, F.I.A., Mr. H. C. Day, F.I.A. (Hon. Sec., I.A.N.S.W.), Mr. J. A. Kethel, F.I.A., Mr. W. de Putron, F.I.A., Mr. A. F. T. Somerville, F.I.A., Mrs. G. A. Taylor, A.I.A., and Mr. G. A. Taylor, Mr. H. V. Vernon, F.I.A., Mr. J. H. Harvey, of Victoria, and Mr. John J. Lough (Secretary, I.A.N.S.W. on leave).

## SCHEDULE OF WAGES AS PER AWARDS AND AGREEMENTS AND THE 44 HOUR PROCLAMATION

TABLE OF HOURS, WAGES, ETC.

Trade.	Country. 48 hours.	City and Suburban. 46 hours.	Date when takes effect.
Bricklayers ..	2/4¼	2/5½	Nov. 16, 1923
Builders' Labourers— (State) .. ..	2/0½	2/1½	Oct. 12, 1923
(Federal 44 hrs.)	—	2/3¾	Nov. 2, 1923
Carpenters and Joiners .. ..	2/2⅞	2/4	Oct. 12, 1923
Wharf Carpenters	2/3⅝	2/4⅞	" "
Plumbers .. ..	2/2⅞	2/4	" "
Slaters .. ..	2/3½	2/4¾	June 22, 1923
Plasterers .. ..	2/3	2/4¼	" "
Painters .. ..	44 hours. 2/4	44 hours. 2/4	Nov. 2, 1923
Quarrymen .. ..	2/3¾	2/6½	May 25, 1923
Masons .. ..	2/5⅞	2/8	" "
Electrical Mechanics Railway, Roads, Bridge, etc., Labourers .. ..	48 Hours.	Wages. 2/2¾	Nov. 1, 1923
	48	1/10¼ and upwards	Oct. 12, 1923

Trade.	Country. Hours.	City and Suburban. Wages.	Date when takes effect.
Crane Drivers (Agreement) ..	48	2/8½	Sept. 21, 1923
Hoist Drivers ..	48	2/5½	" "
Builders' Carters	48	£4/7/6	Oct. 12, 1923
Machinists (Gen. Joiners) .. ..	44	£5/7/6 to £5/9/6	Nov. 2, 1923
Machinists (Labourers) ..	—	£4/8/6	" "

#### Price of Materials.

Bricks (Common) at kiln, per 1,000 .. ..	73/-
Cartage of bricks to site (as per current rate)	
<b>Timber (Basic Prices)—</b>	
Hardwood, per 100ft. sup. .. ..	33/-
Oregon .. ..	31/6
Redwood .. ..	70/-
New Zealand White Pine and Rimu (6in. wide)	47/-
Richmond River or Hoop Pine .. ..	57/-
Cement, per three bags, according to quantity	20/- and 22/6

## SKETCHING COMPETITION FOR ARCHITECTURAL STUDENTS

Members are requested to bring this competition to the notice of architectural students.

Mr. Howard Joseland, F.I.A., offers prizes for sketches by architectural students in connection with the Institute Annual Exhibition.

### Conditions.

1. Any medium may be used.
2. Competitors must be residents of N.S.W., and under 25 years of age.
3. The subjects must be selected in N.S.W. of old or modern work.

In judging sketches, consideration will be given to selection of subject, composition, and quality of work.

1st Prize, £3 3s. 2nd Prize, £2 2s.

Winning drawings to become the property of the Institute, and any drawings submitted which are considered to be of sufficient merit by the Hanging Com-

mittee will be exhibited at the Exhibition on March 6th, 1924.

All drawings, except those premiated, must be removed by the competitors at their own expense, and although every care will be taken of the drawings, the Council assumes no responsibility as to loss or damage.

The sketches will be judged by the donor, Mr. Howard Joseland, together with Professor Leslie Wilkinson.

Each competitor must submit six sketches.

No competitor is eligible to receive first prize a second year.

Drawings must be delivered to the Secretary, Institute of Architects, 5 Elizabeth Street, Sydney, not later than Monday, 25th February, at 4.30 p.m.

J. H. HURST,

Secretary.

---

## INSTITUTE LIBRARY

### *Library Rules for Borrowers.*

1. If a book is lost or stolen from a borrower, or if the same is not returned by him within fourteen days, from the date of issue, he shall replace it, or pay to the Council the full value of such book. In case of the book being part of a set or series, and the borrower neglecting to return the same within fourteen days as aforesaid, or being unable to replace the same, in consequence of its having been lost or stolen, he shall pay to the Council the full value of the whole set or series.

2. A borrower shall keep the books borrowed by him from the Library clean and in good condition, and shall not tear, nor turn down the leaves, nor mark, nor deface, damage, or injure the book in any way.

3. If a book is torn, damaged, marked, defaced, or injured while lent to a borrower, such borrower shall, within one week of notification from the Council, replace the book, or pay to the Council the full value

of the book; or, in case it is part of a set or series, and he shall not replace the said book, the full value of the whole set or series.

In cases where the book is replaced the borrower shall be entitled to the injured book.

4. A borrower shall be entitled to borrow only one book at a time, but at the discretion of the Council two volumes of one work may be issued at the same time.

5. A borrower shall return any book borrowed at the latest within fourteen days after the date of issue; but books may be renewed upon application at the discretion of the Council.

6. If a book is not returned within the time prescribed by the preceding rule, the borrower shall pay the sum of sixpence for each and every day the book is retained beyond the prescribed time.

7. Certain volumes may not be removed from the Library, and are for reference only.



## Building Materials and Craftmanship

*The whole of the information in this section is supplied by the firms mentioned.*

### ELECTRICITY IN THE HOME

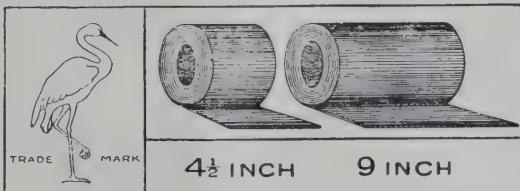
A NEWS item sent out from Washington announces that President and Mrs. Coolidge have just inspected the model house erected by the General Federation of Women's Clubs to further the "Better Homes" movement, and that the two visitors were especially interested in the electric lighting equipment of the building. Almost simultaneously, from far away Australia, comes the report of an "ideal homes exhibition," held at Melbourne, in furtherance of a campaign for erecting a new type of house "equipped with American electrical household labour-saving devices." Are these signs of a determined effort to solve the "servant problem," or merely indications that science, by a natural evolution, has at last seriously addressed itself to the task of placing its discoveries and inventions at the service of the home-makers?

Partly both, and in no field has science more successfully worked toward this end than in that of electricity. Under the old regime of merely mechanical appliances, household duties meant little more than an endless round of drudgery, trying to the temper, and physically, as well as mentally, depressing. With the new dispensation have come in ways and means that ease up effort, save time, and put efficiency and economy in the place of waste. The transformation begins with the wiring, but it takes a surprisingly short time to make connections with the street service, and when the plugs are all in, something like a new epoch opens up for the home thus modernised. Impelled by electricity, a vacuum cleaner unloads the floors and carpets of their accumulations without spreading a trace of dust. The electrical washing machine, banishing the washboard, has alone effected a revolution; hand-rubbing, with its results in backache, in sore and calloused hands, is gone for good, and the operator sees the garments issue forth cleansed in half the time formerly required for the process. And when the moment comes for smoothing out the product, an electric iron eliminates those tiresome trips to the stove in an oven-heated room.

Consider also the advance which electricity had made possible in well-nigh everything that relates to the preservation and cooking of food. Where the older ways linger, great blocks of ice have to be carried in from the waiting team outside; by the new arrangement the refrigerator has become a marvellous instrument which manufactures its own ice, and will even turn it out, when needed, in little dainty cubes for table use.

Then there are the wonders of cooking performed by devices that cut out those frequent journeys to the cellar for coal, supply heat just where and only as long as it is needed, and make the task of preparing meals a delightful occupation instead of a burdensome responsibility. Is it breakfast? The electric percolator is there, and while it prepares the morning beverage, an electric toaster will colour your bread a rich golden brown, and an electric frying pan do to a turn your eggs, bacon, a chop or two and the sliced potatoes. And for mid-day meal or supper there is an electric table range, with stew-pan attachment, that may be used on the dining table under the direction of the house lady herself.

Nor does all this furnish more than a suggestion of the extent to which electricity has been harnessed in the service of the home. The name of the appliances is almost legion, from electric lamps of all kinds to radio outfits, from water boilers to electric fans, from electric potato peelers, dish-washers, dough mixers and water sterilizers to electric curling irons, hair dryers, shaving mugs and shaving mirrors. And new marvels are now on the way, as the leaders in science and in economics do not hesitate to predict. Talbot and Breckinridge, in their book, "The Modern Household," tell us that one of the fundamental goals of domestic administration is such a division of its tasks as will determine the kinds of housework which must henceforth be done by electricity. The changing over of the home by this modern wizard of science is thus a process that is going on before our eyes and one that must be reckoned with.—*Boston Herald*.



### IMPROVED LEAD DAMPCOURSE

Crane Brand. Made by special machinery

### A PERFECT DAMPCOURSE

4½ in. and 9 in. x 20 ft. long (full measure).

Made to Special Requirements  
of the New Building Ordinance.

**ADVANTAGES**—Hard Rolled. True to gauge. Unrolls straight. Superior, and costs less than cutting from Sheet Lead. No trouble. No waste.

Obtainable from Leading Builders' Merchants.

**G. E. CRANE & SONS, LIMITED**

33 and 35 PITT STREET, SYDNEY.

## THE REVIVAL OF INDIAN ARCHITECTURE

By V. B. Metta.

THE house named "Aiwané Rafaat," the Mansion of High Excellence, which Her Highness Nazle Begum Rafiya Sultana has recently built in Bombay, is of great interest from many points of view. Bombay is essentially a European city, since it owes its life and growth to the English, and did not even exist in the days of the Hindu and Mohammedan kings of the country. It therefore does not reflect or interpret the soul of the East to any great extent. Many of its business offices are built in the French or the Italian Renaissance styles, with little Saracenic domes or Gothic spires super-added as mere ornamental details. Absurd and artistically faulty as all such buildings are, they are tolerable as compared with the Gothic railway station and the High Court building of that city. "Were there railway stations in the days when the Gothic architecture flourished?" "Can you associate justice with the European feudal times?" are the questions we cannot help asking ourselves on seeing them. The rich Indians of Bombay, denationalised by the system of education which is established there at present, have imitated the Britishers and built all sorts of buildings which are an incongruous melange of the Gothic, the Renaissance, the French eighteenth century, and other European styles. What Bombay, therefore, needed was a really and truly Indian building like this one to make her Oriental self-conscious.

"The Mansion of High Excellence" is designed by Mr. Fyzee Rahamin, a well-known Indian painter. But feminine influence is quite visible in his design, as it has always been in all beautiful artistic creations of the East from time immemorial. Her Highness the Begum and her sister, Mrs. Atiya Begum (the designer's wife), have, in fact, suggested a good many ideas to him about the construction and decoration, as well as the choice of the building materials of the house.

The Orientals are fond of symbols, because they are intellectually imaginative, and among symbols, the flowers are their most favourite ones. The lotus has been the symbol of India for thousands of years. It has been sung of and sculptured again and again in the ancient literature and art of the country. Therefore you see the whole or parts of that wondrous flower on the capitals and bases of the pillars of this house also. The rooms are large and lofty, provided with daintily carved lattice windows, through whose many-shaped perforations the light streams into them. They are to be fitted up with Indian furniture—*gadis*, *takiyas*, carpets, *tepoys*, and divans—for the Western style of furniture suits neither the Indian climate nor the Indian types of houses, nor the habits of the people. They will, however, be lighted at night, for certain reasons, by electricity, and not by lovingly carved Indian metal lamps fed with fragrant oils. But at the same time it should be noted that the electric light will be handled with Oriental artistry. It will be sent up through the floors of the rooms by means of an X-ray apparatus, to be reflected on the highly-polished white ceilings, whence it will be diffused all over them.

There will also be electric table-fans used there, and these will be placed in little niches in the walls behind perforated stone screens, so that their ultra-modern, non-Indian forms may not obtrude themselves upon anybody.

The ladies' private room in this house, called "Khas-ul-Khas" (the Private of Privates), has a finely carved red sandstone balcony, looking out upon the sea. Elaborately worked walnut wood cupboards will house the books in the "Library," which, in the poetic language of the East, is to be called, "Al Makhazan" (the Treasury). The ceiling in the dining-room will be of delicately and fantastically carved wood. And on the frieze of the front hall on the first floor of the house, you see, inlaid with precious stones, the ninety-nine names of God in Arabic characters. One of the rooms, which is to be called "Astana-i-Khayal" (the Threshold of Imagination), is to be fitted up as a studio for Mr. Fyzee Rahamin. The light comes into it, not only from its doors and windows, but also from a small dome in its ceiling, whose base is fitted up with glass. On its walls are shortly to be painted the representations of the chief religions of the world, in order to show the fundamental harmony, rather than discord, between them. There is a fine kiosk built on a small platform on the terrace roof of the house, where the family will go when the heat of the day has begun to subside; it will be used for offering prayers, as well as for enjoying the view of the city and the breezes that come singing up there from the sea below. There are about three kinds of arches used in this house. The first one is the true pointed arch, which the Mohammedans in other parts of the world consider, for religious reasons, to be absolutely essential in all their buildings. Then there is the polyfoil arch, which the Moors were so fond of using in Spain. And, finally, there is the Jain arch, which is of wholly indigenous origin, and is more of decorative than of constructive value in a building. In other places here, the arch has given place to the trabeate structure of the Hindus, who, though they constructed many types of true arches, did not really like them, because they saw their essential weakness and impermanence. The drip stone, also to be seen in the front part of this building, is absolutely of Hindu origin, but which the Mohammedans of India adopted in their architecture.

I have mentioned the fact that the Orientals are fond of symbols, and that this house is full of them. The finest symbolism, however, is to be found, not in the house, but in the garden, which is planted in front, and at the back of the house. Gardening, it might be mentioned here, has been a highly elaborate art in India for thousands of years. From the spacious days, when the Vedas were written, until after the death of Buddha—that is, for more than a thousand years—gardens went on developing new beauties and modes of revealing great truths. This ancient Indian art, then spread in many other Oriental countries, like Persia, Turkestan, and China, and from them, by a strange irony of fate, the Great Moghuls, the descend-



# IN DAYS OF OLD

RECORDS WERE PRESERVED ON STONE

TO-DAY THEY ARE PRESERVED ON **STEEL**

## STEEL

Fixtures for Offices  
Stores, Record Rooms,  
Banks, Libraries and  
all Government  
Institutions



## STEEL

Fixtures for Offices  
Stores, Record Rooms,  
Banks, Libraries and  
all Government  
Institutions

WRITE FOR INFORMATION

## STEEL PRODUCTS (Australasia) LIMITED

374 GEORGE STREET, SYDNEY

Phone: REDFERN 819

Cables: "ADEQUATE"

Postal: G.P.O. Box 38, SYDNEY

## "CEMORTA" is 20% stronger than hand-mixed Mortar

A scientific combination of best Portland Cement mechanically mixed with thoroughly dried Sydney or Nepean sand.



Government Tests with Sydney sand by the Public Works have proved that "CEMORTA" greatly exceeds the specified requirements of standard sand.

WORKS ALEXANDRIA N.S.W.

"CEMORTA" is ready for use, eliminates all waste, and ensures uniform strength.

FULL PARTICULARS:—

CEMENT MORTARS LTD., 4 Bridge Street, SYDNEY  
Telephone B 5642

# Sydney Glass Co. Limited.

(Late Sydney Glass & File Co. Ltd.)

**SHOP FRONTS.**

**BEVELLING and SILVERING.**

**BUILDERS' GLAZING.**

**LEAD LIGHTS.**

**Sole Agents Standard Patent Glazing Co. Glazing Bars.**

**496-504 HARRIS STREET, SYDNEY**

**Tels. M 1922, M 1923**

ants of Tamerlane, carried it back in a modified form to India, the country of its origin. The garden of "Aiwané Rafaat" is a true Indian garden, unlike all other gardens in Bombay, whether public or private. It is laid out in the form of the Cosmic Cross. The house is situated where the lines of the cross meet, and so is its Mount Meru, the abode of the gods, which should be represented in the centre of every Indian garden. In the front part of the garden will be placed a standing statue of Buddha, from under whose feet the River of Life will rise and flow right through the front position of the garden, then pass under a stone bench in the front hall of the building, whence it will flow into another room behind, from which it will pass out into the back portion of the garden,

which is to be laid out in three terraces, one rising above another—emblematic of the Three Worlds. Flowers of three particular colours will be grown in the garden to represent the Hindu Trimurti (Trinity). These three colours are red, blue, and white. The red ones will represent Brahma the Creator, the blue ones Vishnu the Preserver, and the white ones Shiva the Destroyer. Then, again, will be seen the Orientals' amorousness exhibited in this garden, because the lotus, representing Leila, will be placed in the vicinity of the weeping willow, which will symbolise Majnun, her hapless lover. There will also be cypresses, the symbols of eternity, round which will be entwined fruit trees, the emblems of this life.—*The Builder*.



1. Light Battens checked into studs.



2. Nailing "AdamO" Sheets.

## Architects Specify "AdamO"

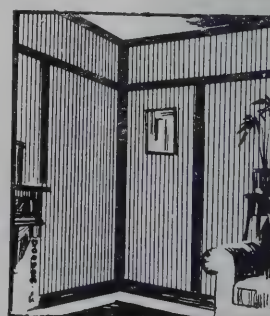
because it will not buckle, warp or crack, and readily lends itself to Artistic Treatment.

## Builders use "AdamO"

because it is light and easy to erect. "AdamO" is sawn and nailed like wood.



3. Painting.



4. The Room Complete.

*Booklet free on request to*

**William Adams & Co. Ltd.**

**Cr. King & Clarence Streets :: Sydney**

*With Branches in all Six States.*



## THE COMPLEAT ARCHITECT

By Dudley Harbron.

## VIII.—Converse.

In one of the issues of the *Tribune*, a daily paper unhappily defunct, there appeared a short story entitled "The Monkey Tree," by Rudyard Kipling. I remember hardly anything about the story as a story, but I seem to recollect that that distinguished writer attempted incidentally to do for a house the sort of thing which he has done for engines, bridges, and boilers—that is, to toy familiarly with the working parts. Even he did not venture far into the intricacies of the building glossary.

I do not wish to labour the point, but does it not need an architect, a builder, or an operative to put in their right places all the little details of finish, workmanship and material that cluster round the occupation of creating an edifice? In talking to each other, and to and with workers in the same calling, we can use a language that amongst relatives would appear affected, whereas between ourselves it is quite natural and useful. True, the technical vocabulary breaks down now and then, and perforce we have to make use of rough English, to help us characterise mouldings with "too much belly," and mixtures which are "fat" or "thin." But the application of these adjectives in their respective cases remains a secret not overheard by the public ear. All other callings worth the name have a kindred symbolism that is Greek to the outsider.

When we can talk freely in this jargon of our calling we may be considered to have passed through the initial novitiate state, to be genuinely interested, absorbed, and merged with and into the profession. We no longer call plans elevations or elevations plans, as do the Philistines. An architrave for us has a definite significance. A floor is not exactly what it appears upon the surface, but something of depth as well as breadth, with an underside of filling, sleeper or ceiling.

In my youth, I remember, I spoke of "paints." I was very young. I was sharply corrected by a voice (now professional), "colours." I have never forgotten that initial transition from the boilermaker's outlook to that of the architect. Nor do we make it suddenly, unless we keep our mouths shut and our ears open for a very long time. We become inoculated by contact. Unification used to be attained by a rather rough method. "Who is the greatest architect of the day?" There was only one answer. An illustration of Scotland Yard, framed upon the wall, gave you a hint. If you were bright enough to take it you were "welcome." If too obtuse, then, "good-day." This brusque sort of conversation has its merits, not only in separating the sheep from the goats, but in distinguishing the interested from the amused.

There are not wanting a disgruntled set of critics,



## The Ornamental Steel Manufacturing Co. Ltd.

We are Craftsmen in the Manufacture of  
**Ornamental Steel Gates**  
**Entrance Doors and Railings**  
**Collapsible Gates**  
**Lift Enclosures**  
**Lift Cages**  
**Grills and Tenants' Boards**

**Metropolitan Mutual Life Building**  
 Cr. HUNTER and BLIGH STS. :: Tel. B 5610

who object to the language of art. They believe in calling spades—spades; though to a spademaker that simple tool must consist of a hundred-and-one parts, definitions, and attributes. It is a complicated piece of mechanism into the very interstices of which he has delved, as only a spade-maker should. I do not object because I cannot follow him. It is only when language obscures the conception instead of elucidating that the critics' complaint is justified. Let the critics simplify their language if they must; indeed, the composition of their audience renders it imperative; but leave us our refinements, our feeling of them in profile and perspective. Granted that there are stages, and that he who oversteps that to which he has attained is presumptuous; the journey along the road is full of incident, and the further we travel the more interesting does it become.

It is a phase of art that does not enter into the news, because the full discussion of technical matters has not a broad enough appeal and takes up too much space. Thus the valuable acquirement of being able to do so in words can only be gained in conversation. Only the individual who devised the member can fully detail why. If he cannot, and at the same time convince his auditors of its rightness, there must be something wrong somewhere. The creator should be able to explain his creation. If we cannot talk about these things, there must be precious little to say. No amount of eloquence will justify a meaningless, stunted, coarse element in design. The opening apology is sufficient condemnation. There are words finer sounding which, nevertheless, should awaken suspicion and suspend judgment—"Decorative"; regard it carefully in order to make sure that it answers the definition of the

dictionary, "Fitted to adorn." In course of time it has acquired an application remote from its true meaning.

In the survey of the means at our disposal by which we can add to our store of knowledge, and develop our powers to the limit of capacity, conversation is apt to be regarded as too trivial a method for consideration. Books have usurped the place formerly held by discourse between the instructor and his pupils; though the dialogue form survived in print until quite recently as a relic of other days. When, therefore, occasion is offered to talk without offence upon matters pertaining to the profession, it should be seized and enjoyed. Even if we gain nothing more by its exercise than a habit of arranging our thoughts and expressing them with clarity and conviction, we have not misapplied our time. All of us can learn from each other. *Viva voce* occupies an important place in examination.

Of course, there are innumerable aspects of an architect's calling capable of discussion. Discuss them. Do not be content to accept on trust. Endeavour to formulate for yourself a reason, an explanation or a condemnation. If your solution coincides with someone else's, that is no matter for disquietude. If in disagreement, it is no matter for temper. In converse we can rub off rough corners and become persuasive.

All this alludes to conversation among brothers—intimate conversation. Among strangers it is different. A witty Frenchman wrote the words, "Never show your wounds except to a physician." They are equally true of beauty spots. It is important not to let your calling down before laymen, nor to laud it unduly on the tram top. Let works speak. Help him to hear. Do not deride his views, correct them.—*The Builder*.

## The Building Art: Theory and Discussions—ix.

By W. R. Lethaby.

### *The Architect of Westminster Abbey.*

In his fine new book on Westminster Abbey, Mr. Westlake, by fresh study of the documents preserved at the church, has shown that Master Henry, the mason, who was what we should call the architect of Henry the Third's great work, was almost certainly the same as "Master Henry de Reyns Mason," mentioned in 1256, in a deed by which Hugh, the son of this Henry, assigned to the Abbey a rent of five shillings a year from a messuage in Westminster which had been given to him by his father.

Now, it has long been acknowledged that many characteristics in our church are derived from the cathedral at Rheims, and this fact, together with the name, makes a strong case for arguing that the architect at Westminster was a Frenchman, who had been employed on the French coronation church, and was brought here by Henry III. to build the English Coronation Church. On the other hand, the general view in regard to the architectural character of the church has been that it is specifically English, but shows study of contemporary French art. Sir Gilbert Scott put it thus:—

"Judging from internal evidence, which is all we have to go upon till the documents are thoroughly searched, I should imagine that an English architect, or master of the works, was commissioned to visit the great cathedrals then in progress in France with a view of making his design on the general idea suggested by them. The result is precisely what might have been expected from such a course. Had a French architect been sent for, we should have had a plan really like some French cathedral, and it would have been carried out, as was the case with William of Sens' work at Canterbury, with French details. As it is, however, the plan, though founded on that common in France, differs greatly from any existing church, and contains no French detail whatever, excepting the work of apparently one carver. The church is remarkable as marking the introduction of the French arrangement of chapels, which, however, failed to take root here; and the completed type of bar-tracery, which was no sooner grafted on an English stock than it began to shoot forth in most vigorous and luxuriant growth."

Our being able to accept a French architect for our famous church depends on whether we can allow a predominantly French character to its architecture.



This is a question of style criticism, and it is as difficult of proof as it would be to prove whether an unsigned picture was by Raphael or Titian. Certain students will be quite sure for themselves without being able to demonstrate their view. It happens that my days of studentship were in the time when there was a special enthusiasm for French cathedrals, and I must have been one of the last of those who concentrated on the "professional" study of these masterpieces of structural art. I have worked, measuring and drawing, at all the great monuments of Northern Gothic art, at some of them again and again, and I may set down three dozen as they occur to me partly for the sound of the delightful names: Amiens, Rheims, Paris, Beauvais, Chartres, Bourges, Vezelay, Tours, Nevers, Autun, Auxerre, Clermont-Ferrand, Lyons, Nantes, Laon, St. Quentin, Noyon, Soissons, Senlis, Meaux, Chalons-sur-Marne, Langres, Strasbourg, Rouen, Coutances, Bayeux, Le Mans, Troyes, Sens, Angers, Poitiers, Tournay, Geneva, Lausanne, St. Omer, and Abbeville.

Without bias I vote for a French master, for it would be a romantic thing to have a great French church in London. All English architects, so far as I know, have taken the same view, so also have American students, and no Frenchman has wished to claim Westminster as an example of great "ogival art." It has been carefully studied by Count Paul Biver, Mons. C. Eulart and Viollet le Duc—the last named, significantly dated the south transept at Westminster as 1230—that is, he thought it not nearly so advanced as French work would have been in 1250.

Mr. Westlake supports his theory by a reference to

the late Mr. F. Bond's *Westminster Abbey*, 1909. However, it was not Bond's view that a French master conducted the actual works at Westminster. His was an intermediate position. He pointed out French characteristics, such as the radiating chapels; the proportions of the interior and the tracery of the windows; the buttress system; the north transept front with its porches. Then he considered how far English ways prevailed. But, he then argued: "Practically in all essentials it is a French church and had little influence on English architecture." However, he goes on: "If the church was designed by a Frenchman it was certainly not carried out by him. It was designed by a Frenchman, but built by an Englishman." He did not know that the Henry, who was the first master, probably had the name of Reyns, and he might have gone further in his claim if he had; but his recorded view was that a French master sent some drawings and "may never have come near the work." This scheme would have allowed of the large English contributions in the work which Bond himself admitted, whereas, under a resident first master who was a Frenchman, these could not be explained. Even this view, however, does not sufficiently recognise the English "feeling" which penetrates the entire work done from 1245 to 1270.

Mr. Westlake says: "When so much of the skeleton fabric is French, and nearly all the subsequently added detail English, is it too much to suppose that he who had to do with the former was a Frenchman? It is not possible to divide skeleton and detail in this way. Much of the skeleton is of English type, and the detail



The Beauty of Flat Ripolin must be seen to be realized.

Flat Oil Paints are quite different.

**Specify Ripolin**

Procurable Everywhere

**L. A. CORMACK**

Factory Representative 4 Underwood Street  
Telephone B 3284 (off 35 Pitt St., Sydney)

INTERSTATE AGENTS—

Melbourne: Standard Agencies Pty. Ltd., 379 Flinders Street

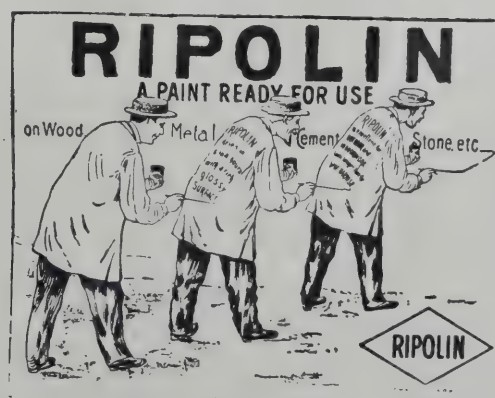
Adelaide: Clarkson Ltd., 124 Rundle Street,

Brisbane: S. J. Squires & Co. Ltd., 171 Elizabeth Street,

## The Extravagance of Cheapness

Durability, Beauty and Covering Capacity Entitle Ripolin to its Acknowledged Position

The World's Best



is subsequent only to the plans, not to the building of the skeleton. Again, it is further suggested that the English character of our church may be explained by the fact that the works were not very forward when Master Henry died, about 1253. Now, there are two important fabric rolls of this year which have been printed and analysed by the late Professor Willis (G. G. Scott's *Gleanings*, p. 231), and from these and other references we can determine, within fairly narrow limits, the progress of the works up to this time. The eastern part of the Confessor's church was destroyed in July, 1245, and actual building from this time was pressed on by the eager King.

The crypt of the Chapter House must have been the first part of the whole church which was entirely completed (say, 1246), and this is English in every respect. The three bays of the cloister between the Transept and the Chapter House entry have the next earliest vaults, and these may be dated about 1248-50; they are of an earlier character than the vaults in the church, but like them, they are typically English. The first part of the superstructure to be finished was the Chapter House, and this, everybody admits, is in the English tradition.

As early as 1278-9, "task work" (by special agreement) for the masonry in the cloister (under the west side of the south transept) is recorded.

In 1252-3 the King ordered that timber should be obtained for the roof of the new work of the church and for the stalls of the monks in the same. In the Fabric Roll of 1253 we find references to great marble columns (doubtless those of the interior); window tracery; voussairs (of the arches); bosses, and chalk for the filling of the vaults; also a large quantity of iron from Gloucestershire (for the tie bars of the arches and stanchions of windows). Still more significant of the completion of some parts, we find lozenges (marble squares for paving) mentioned; and glass, white and coloured, which was issued for the use of several glaziers. Plumbers were also employed, and limewashers and painters. The entry to the Chapter House from the cloister was being built, and canvas for the windows of the former was obtained.

On this last item, Prof. Willis remarked: "The mention of canvas for the windows of the Chapter House shows that these windows were so far completed in 1253, as to require to be closed with canvas until the glass was ready for them." Two sculptured figures for the Chapter House (probably a beautiful "annunciation" group) are also mentioned at this time, and later in 1258, it was directed that the residue of the tiles used for paving the Chapter House should be laid elsewhere.

As early as 1249 the King had ordered Master John, of St. Omer, then painting the King's wardrobe, to make a great lectern for the "new chapter" (Liberate Roll). Now Matthew Paris mentions the incomparable Chapter House at Westminster under the year 1250, and it may not be doubted that it was even then well advanced. The fine tiles, which are still on the floor, would have been put in hand about 1250-5. They contain the pattern of the great rose windows of the transepts, which must thus have been designed before the tiles. These windows thus belong to Master Henry's work. Indeed, this is shown by the fact that

they are the most French of all the parts of the church, and they certainly belong to the first French copying impulse. So do the fine sculptured angels in the spandrels just below them, which were inspired by angels at the Ste. Chapelle. It becomes clear that the first work—1245-58—was settled wholly by Master Henry.

On November 7, 1254, Henry III. issued a mandate that money should be provided from the Treasury, or otherwise to recall the workmen who had left (on strike), for the church must be consecrated at latest on the translation of St. Edward, the Quinzaine of Michaelmas. This, of course, only applies to the eastern part; the intention to consecrate may have been one of the King's extravagances, but the work must have been far advanced. Indeed, I am now disposed to think that the portrait head in the north Transept may be that of Master Henry, rather than his successor. In 1258 the work to the west of the crossing was undertaken.

There is no change of style in any part of the first work (up to 1258). Already in the wall-arcade of the Chapter House, which can hardly be later than 1247, diapered spandrels—the most differentiating characteristic of the internal work of the whole church—are found, and in the upper part is the most advanced tracery. Gilbert Scott, considering this question, said:

"The church itself was by this time (1253), indeed as early as 1249, in a state of rapid progression, so that the architecture must, in the main, have been settled at the time of its commencement."

Twenty years ago I wrote: "Master Henry must be considered the architect of the building in all its parts." Then, after pointing out the debt to France in detail, I added: "We may readily make the fullest allowance for French influence at Westminster, for so entirely is it translated into the terms of English detail that the result is triumphantly English. It is a remarkable thing, indeed, that this church, which was so much influenced by French facts, should, in spirit, be one of the most English of buildings. This, perhaps, is only to be felt by those accustomed to read what is in buildings and cannot easily be demonstrated." I gave some details as to the character of the details in a notice of Mr. Bond's book in the *Journal of the Institute of Architects* (1910).

As was well said by an English architect—I think Sir Gilbert Scott's son—"Westminster Abbey seems like a French thought in English idiom."

Now, we will go back to what is known of Master Henry and consider whether he was necessarily a Frenchman if, as appears to have been the fact, his second name was Reyns. I have to make a little reservation even here, for if it could be proved that Henry de Reyns, the mason, must himself have come from Rheims, then I should have to think that he could not have been the same Master Henry who began to build the church. I may remark that the name Henry was very popular in England at this moment; and I cannot see, even if Reyns necessarily represents Rheims, why the Henry of that name should himself be a Frenchman. Matthew Paris does not seem to have been a Frenchman; William Torel, the artist, who made Queen Alionor's exquisite, but very English bronze effigy, also bore a French name. If Master Henry had



Telephone B 2407

**LOUGH & SHAW**  
QUANTITY SURVEYORS

JOHN J. LOUGH  
H. E. SHAW

Atlas Buildings  
8 Spring Street

Phone B 3779

Phone Private. Hunter 405

**C. PEARSON SHAW**  
QUANTITY SURVEYOR

BOND STREET CHAMBERS,  
2 BOND STREET, SYDNEY

Late Valuer City Properties for Federal Taxation Department.

Telephone City B 3772

**JEFFRIES & DUNNINGHAM**  
QUANTITY SURVEYORS

Walter Jeffries  
J. C. Dunningham

N.Z. Insurance Buildings  
79 Pitt Street,  
Sydney

Tel. B 1906

**CHAS. A. HARDING & SON**  
QUANTITY SURVEYORS

Fifth Floor,  
Gibbs' Chambers,  
Martin Place

JOHN HARDING

Telephone: B 3565

**LONEON & HOCKING, Ms.Q.S.A.**  
QUANTITY SURVEYORS

16-20 Bridge St., Sydney.

MR. F. MORTON HOCKING

Estab. 1885

**J. ANDERSON WOOD & SONS**  
QUANTITY SURVEYORS

Pitts Building  
476 Collins Street  
MELBOURNE  
Phone, Central 5810

Union Bank Chambers  
68½ Pitt Street  
SYDNEY  
Phone, B 3932

# SHELL LIME

Imparts that lustrous plaster finish to WALLS and CEILINGS that is quite unobtainable with ordinary STONE LIME.

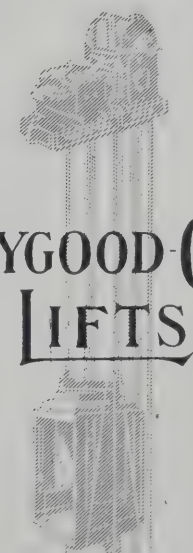
*Produces a Glossy Pearly Sheen*

## IT IS THE BEST

See it in Union House, London Bank Building, Theatre Royal, Government Savings Banks, Hampton Court Flats, and scores of other buildings.

Leading Architects ALWAYS specify Shell Lime for Plastering

**A. WARNES & SON**  
KILNS: CANAL ROAD, ST. PETERS  
TELEPHONE L 1141



## WAYGOOD-OTIS LIFTS

ALL PARTS STANDARDISED  
Fitted in the Principal Buildings  
Throughout Australia

Waygood-Otis (Aust.) Pty. Ltd.  
4 Nithsdale Street, Sydney, New South Wales  
80 Queen's Bridge Street, Melbourne, Victoria  
Tyrrill Buildings, Telford Street, Newcastle

been specially brought from Rheims to build the church it would be difficult to understand why the name Reyns does not appear while he was working for his patron. It has further to be pointed out that the Oxford Dictionary gives Reynes as a form of the name Rennes; and as Mr. Westlake says, "It must not be forgotten that Rayne in Essex bears a name somewhat similar in sound."

The two successors of Master Henry at Westminster took their names from Gloucester and Beverley, and is it not probable that Henry was called from Rayne, otherwise Reynes? Some entries in the Patent Rolls show that at the time with which we are engaged, Reynes, in Essex, was a place well known to Henry III., who issued three mandates while staying there. In 1240 the King ordered that a tun of wine should be sent to "Resnes" (Liberate Roll). In the index to the charters at the British Museum, I find that "Reine" was said to have been granted to Westminster itself by the Confessor. There is a further charter of the time of Henry II. where it is called Reines, and in 1417 it is spelt Reygne.

In the London Feet of Fines, William de Reimes is mentioned in 1198 in reference to land at Edgware; and in 1230 William de Reyne is named in connection with premises in Stanmore. The names, or forms of the same name, Reynes, Raines, Roynes, are also found in the Patent Rolls of the time of Henry III. In the calendar of St. Paul's Documents, Great Reynes is mentioned. In Buckinghamshire is Clifton Reynes with a church in which are several fine tombs of members of the Reynes family.

There is thus ample evidence to show that a mason bearing the name of Reyns and working in London may not himself have come from the city of Rheims. There are also reasons beyond the (to me convincing) architectural evidence to show that Master Henry was, in fact, an Englishman.

The first known reference to him is a mandate issued December 10, 1243, that robes should be given to William de Brun, and to Henry, Master of the King's masons. The King had come to Windsor on the day before to keep Christmas, and this is the first of several orders for robes which were granted once or twice a year to persons in the King's service. Now William le Brun was a King's clerk and Keeper of the Works at Windsor. Sir. W. St. John Hope tells us of certain works offered in 1243 that "the custodes operacionem, at this time seem to have been Hugh Giffard, William le Brun, and Simon the Carpenter, who were custodes the following year." These robes of office and the title "master of the King's masons," show that Master Henry occupied the regular office of King's mason. The association with William le Brun, and the place where the order was issued, make it probable that the mason was occupied at Windsor. And of this there is further evidence.

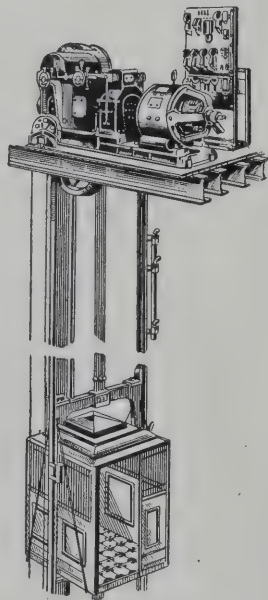
In 1243 a mandate was issued to the Sheriff of York that the castle there should be strengthened according to the advice of *Magistrum Simonem Carpentarium et Magistrum Henricum Cementarium*, whom the King sent to confer with "other masters expert in the science" (Close Roll, wrongly indexed—p. 291 instead of 293). Such work was part of the ordinary duties of the King's master masons and carpenters, and Simon at least had practice in castle work at Windsor. We have already seen that he was engaged at this time at Windsor. Master Henry seems to have retained the office of King's master mason until his death, about 1253.

We know that a son of Master Henry, of Reyns, was living in 1256, as shown by the record of his gift to the monastery. Forty years later, as appears in the accounts of the erection of the Eleanor crosses, a master mason named Nicholas Dyninge de Reyns built the cross, which still exists at Waltham, and is a typical piece of English work. The name Raine is still well known. Proceeding from my conviction, the result of all I know about mediæval architecture—that Westminster Abbey Church is English work, and allowing that the Architect, Master Henry, probably bore the name of Reyns, I conclude that this was the name of a place in England or of some family settled in the country before the time of Master Henry.

When I studied the work of Master Henry, some twenty years ago, I suggested that he was the architect of the King's Chapel at Windsor, built about 1240. Mr. Westlake's theory does not allow of this. His view is that Henry III. saw Rheims Cathedral when he was in France in 1243, and that he found his architect at Rheims itself. After his return, Master Henry comes "suddenly into notice by receiving on December 10, 1243, together with one, William le Brun, a gown of office as Master of the King's Masons." The building of the Chapel at Windsor was in progress, but with it the mason "seems to have had no association." A reference to Sir W. Hope's big book on the Castle

# Monarch Electric Lifts

Safe, Reliable  
and Efficient



Monarch Electric Motors Ltd.  
2-4 RENWICK ST., REDFERN, N.S.W.

TELEPHONE—REDFERN 453

CONTRACTORS TO N.S.W. GOVERNMENT



is given, but there it is only said "very few names have been preserved of the craftsmen engaged for the period under notice."

No other King's mason than Henry is known at this time, and the work is likely, by reason of his office, to be his. Further, the existing part of the chapel so singularly resembles Westminster work, that no one who will compare them will be able to doubt that they are by the same master. The chapel was part of a large "work," which included new chambers for the King and Queen. Of the Chapel, Sir W. Hope says: "In 1239-40 the King issued a writ to Walter de Burgh for the making of a Chapel 70 feet long and 28 feet wide. The north wall of this below the windows is actually a work of King Henry III." In 1244 another order directed that the works should "proceed winter and summer until the King's Chapel be finished." It was to have a high wooden roof, like that of the new work at Lichfield, "so that it may appear to be stonework." I take this from Hudson Turner. Sir William Hope translated the last words (*appareat opus lapideum*) "so that the stonework appear," but the meaning was probably that it should have a wooden "vault." The Windsor Chapel had no buttresses, and, therefore, no stone vault, and the north transept at Lichfield, which appears to have been the new work mentioned, only had a wooden roof. The question arises, was the latter the earliest English "wooden vaults," and had the King's masters anything to do with it? There are points about the transept doorways which are closely akin to the style of the Westminster master, and I could suppose that he had worked at Lichfield before going to Windsor. The details at Winchester Castle should also be compared with the Abbey work. Stone church seems to be by some mason who worked at Westminster.

I have made a special re-examination of the Windsor work, and I have no doubt whatever as to its near connection with Westminster. Not only was the master the same, but the carver of some of the capitals also worked in both places. The Windsor work consists of an arcade of large blind arches along the face of the external wall of the chapel, which formed the inner wall of a cloister. These arches resemble those of the eastern cloister walk at Westminster in function and in many details: in the sections of the arch

mouldings; in the fact that the arches have no drip-mouldings (compare the smaller arches next the Chapter House entry at Westminster); in the planning of the piers (two orders in one, three in the other), and the use of extra stout Purbeck shafts, about  $7\frac{1}{2}$  in. in diameter: the profile of the bases with the large roll overhanging the part below and the carved capitals. One of the arches at Windsor is much narrower than the others; this was at the end, and doubtless represents the width of a cloister walk; the wider arches rise only to the same height, and are segmental, the centres being some 2 ft. below the springing line. A bold use of such arches is one of the singularities of Westminster; we find it in the Chapter House entry, the diagonal vaulting ribs of the bays of the cloister between it and the church door, the interior of the doors of the north transept, the outer arches of the triforium windows, in a marked way over the Poet's Corner door, and above all, in a big wall arcade in St. Faith's Chapel, which is remarkably like the Windsor arcade in scale and general character.

Sir Gilbert Scott illustrated in *Gleanings* (p. 33) two capitals from the interior wall arcade at Westminster, which were of French character. He wrote: "Many of these are of the English type of the period, but among them are two kinds, both of which are in their carvings distinctly French. The one is the Crocket capital, the stalks of which are terminated, not as in English work with conventional, but with exquisite little tufts of natural foliage, such as may be seen in the wall arcading of the Sainte Chapelle and many other French works of the period. In the other, natural foliage is introduced, creeping up the bell and turning over at the top. In both, the foliage is smaller and less bold than in French work, and the form of the capital is English." Now, among the capitals at Windsor, we find ordinary Early English foliage and both varieties of the French fashion, which so closely resemble those at Westminster that they must be by the same carver. One capital at Westminster, to the right of the tomb of the Princess Katharine, has naturalistic oak leaves. In the Museum is a capital, of which the stalks of the "croquets" cross. These were carved by the same man! The flat leaves may be compared with similar carving on the upper chamber between the capitals in the east walks

## PERMANENT CEMENT FLOORS GUARANTEED

Our many enquirers will be pleased to know that excellent supplies have arrived of

We guarantee **METALCRETE** to be absolutely uniform, and free from all foreign and injurious matter, such as OIL, SILICA, FOUNDRY FACINGS, DUST, Etc., which are harmful, and retard the setting of cement.

Supplied in Steel Kegs,  
each containing  
100 lbs. Net.



We guarantee that **METALCRETE** is scientifically made of LIVE METALS not burnt, dead or pre-oxidised, which are pulverised and chemically treated, so that each particle of metal expands upon coming in contact with moisture, hence with Portland Cement, will hermetically seal all voids, thus producing a dense, hard, sanitary, waterproof floor that under the hardest usage cannot dust.

**WEARPROOF, DUSTPROOF, WATERPROOF**

Full particulars of **METALCRETE** and how to produce permanent Cement Floors  
"THE FLOORS THAT NEVER NEED REPAIRS," from

**ROSENFELD & CO. PTY. LTD., 352 KENT ST., SYDNEY** Phones: City 283, 284, 285  
Hardware Store, Glebe, M2127

of Westminster cloister, now much decayed. At Westminster these are similar, but more developed. They occur again at Stone, where there is carving, including a dragon in foliage and a negro's head, which must be by a Westminster carver.

The Windsor Chapel was, in regard to the masonry details, the prototype of Westminster Abbey. This fact, and the references to Master Henry, which are almost conclusive in themselves, show that he was the architect of Henry the Third's Chapel at Windsor. We thus carry back his tenure of the office of King's mason to 1239-40. He was not, therefore, first employed by the King on the great new Church at Westminster, begun in 1245.—*The Builder*.

#### ARCHITECTURAL EDUCATION IN SOUTH AFRICA.

The education of the South African architect is not to be neglected, as a conference, to be held in Durban, will provide a scheme for systematised professional training, applicable to the whole of the Union of South Africa.

The ideal is that a system of training and examination will be formulated with a view to standardising the requirements and arranging a scheme which will in all respects follow the R.I.B.A. curriculum, with such modifications as may be necessary to suit South African conditions.

The Cape Institute of Architects, who suggested this conference, and who has undertaken the preliminary arrangements in connection therewith, is highly gratified with the representative results that have been obtained since the invitations to the various bodies were issued, for this conference is representative not only of the Transvaal Institute of Architects, the Natal Institute of Architects, the Orange Free State Institute of Architects, and the Cape Institute of Architects, but delegates are being sent from the Witwatersrand University, Cape Town University, Port Elizabeth Society of Architects, East London Architects, Durban Technical College, and the Union Department of Education.

#### MUROMATTE FLAT OIL PAINT.

This well-known paint has been used fairly extensively throughout New South Wales and among the city buildings in which this product has been employed, we might mention the Theatre Royal, Hillier's, and the Golden Gate Cafes, Paddington Town Hall, Ocean House, Imperial Service Club, United Insurance Chambers in Hunter Street, Banking Chambers (A.B.C. Bank), and The National Bank of Australia Ltd.

The above list shows that discriminating houses select Muromatte flat oil paint and that it must be a good lead to follow.

## Supreme Cement Quality

In recent tests for COMPRESSIVE STRENGTH conducted by the N.S.W. Public Works Department, Kandos Cement showed the following results:—

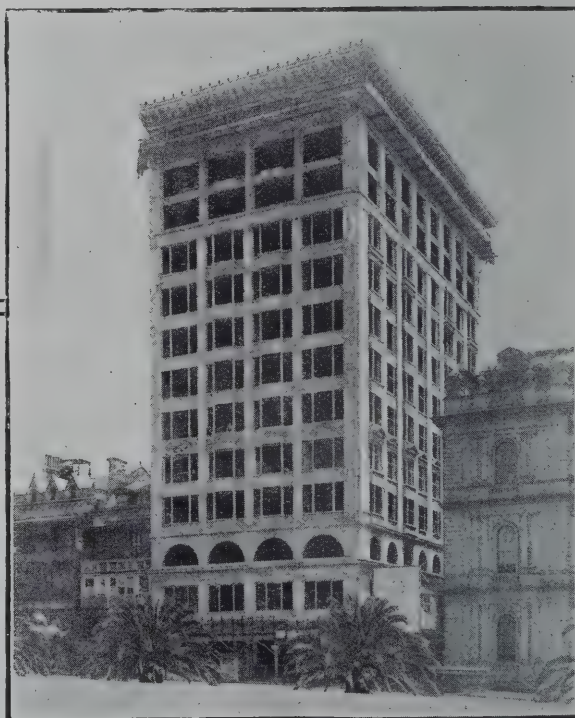
Water-Cured Concrete—standard required, 2,250lbs. per sq. inch.

KANDOS TEST RESULT—7,683lbs. per sq. inch.

Water and Air-Cured—standard required, 3,570lbs. per sq. inch.

KANDOS TEST RESULT—7,513lbs. per sq. inch.

*For all Building purposes Kandos Cement is a Pledge of Absolute Dependability and Permanent Endurance*



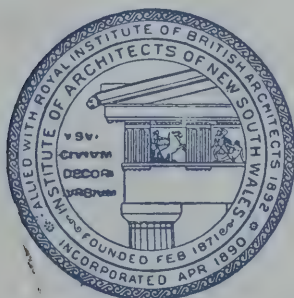
ASTOR FLATS  
Macquarie Street, Sydney  
Constructed of Kandos Cement



THE JOURNAL OF THE  
176 SEP 1924  
UNIVERSITY OF ILLINOIS

# ARCHITECTURE

THE JOURNAL OF PROCEEDINGS  
OF THE INSTITUTE OF ARCHITECTS  
OF NEW SOUTH WALES



DECEMBER 15TH  
1923

VOL 12. No. 12 PRICE ONE SHILLING

Registered at the G.P.O., Sydney, for transmission by post as a Newspaper

# EXPANDED STEEL AND CONCRETE PRODUCTS CO.

Phone B 3025

SOMERSET HOUSE, 9 MARTIN PLACE, SYDNEY

**ARCHITECTS**—Our Engineers are at your service and will co-operate with you in preparing designs for all classes of Re-inforced Concrete Structures.

**BUILDERS**—Our Engineers are at your service for any advice during construction.



WE SUPPLY—

**RE-INFORCING BARS** Cut and Bent to Design  
**EXPANDED STEEL** All Sizes  
**METAL LATHINGS** All Gauges  
**INSLEY CONCRETE HOIST PLANTS**  
**CONCRETE MIXERS, Etc.**

## A Good Lavatory Basin is better than a Wash Stand

It saves space in one's  
Bedroom.

Inspect our fine stock of  
British White Earthenware  
Lavatory Basins, with com-  
bination overflow (as illus-  
trated)

20	x	16 in.	49/-
22	x	16 in.	52/6

With Round Front

26	x	14 in.	49/-
----	---	--------	------

Angular Patterns

31/6, 37/6, 84/-

Fittings for above extra.



**F. LASSETTER & CO. LTD., George St., Sydney**



# From Roof to Basement

How often have you as a business man, been annoyed that it takes so much time and creates so much noise whenever you wish to get in touch with members of your staff?

It need not be so.

## **Western Electric Inter-phones**

enable you to get into immediate touch with any staff employee, whether working in the basement or at the building top. Your message is quickly and directly conveyed without any fuss or disturbance. Allow us to send a representative to discuss Western Electric Interphones, or write for special folder.

**Western Electric Company  
(Australia) Ltd.**

**192-194 Castlereagh Street, Sydney**  
(A few doors from Park Street) Phone City 336-356

AGENTS—

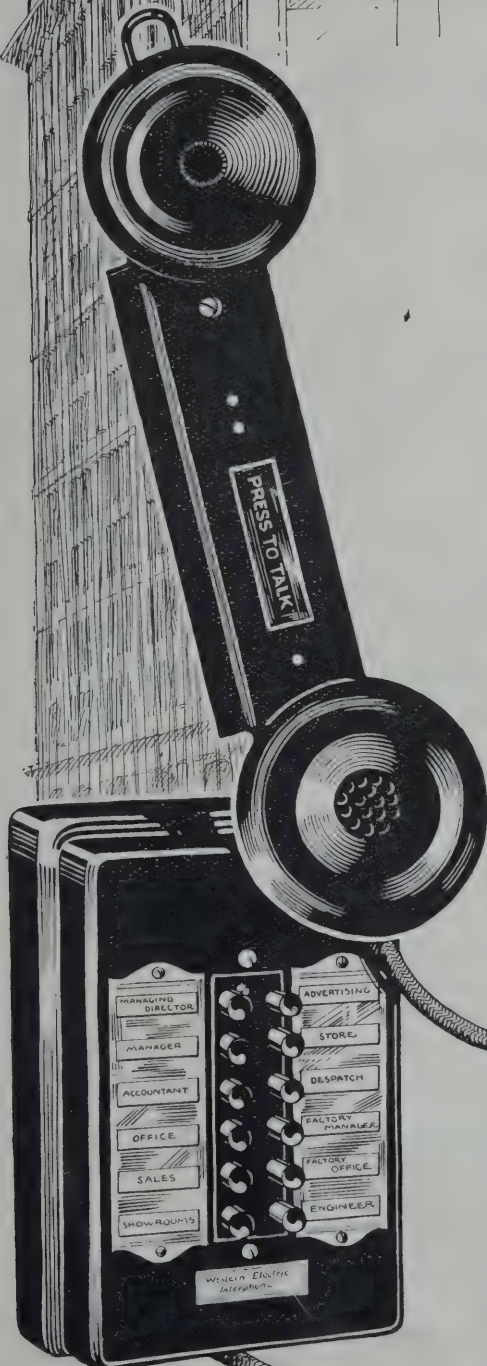
C. R. Foster, 588 Bourke Street, Melbourne

T. Tonks, Elizabeth Street, Brisbane

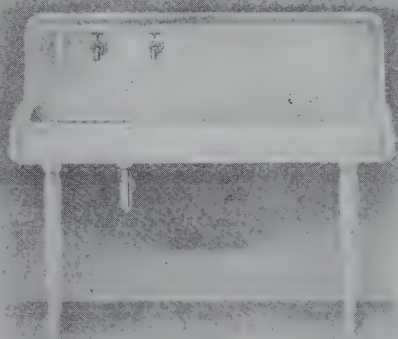
Unbehaun & Johnstone, 100 Currie Street, Adelaide

Unbehaun & Johnstone, 37 King Street Perth

**Western Electric  
QUALITY PRODUCTS**



For Over 40 Years Sellers of Satisfactory  
**Sanitary and Ablutionary Appliances**



**SWANS**

Now Supply

**Wall and Floor Tiles**

Quotations Ex Store or  
Estimates (Fixed) Gladly Given

**Swans Limited**

304 PITT STREET, SYDNEY

**Baldwin's "PHOENIX CROWN" British**

**Galvanized Corrugated & Plain Sheets**

**Baldwin's Black Sheets**

(Specially Manufactured for Australian Requirements)



Made from highest grade materials  
Heavily coated with pure spelter - - -  
Used by all Government Departments

Sole Agents of Australasia and New Zealand :

**R. Johnson, Clapham & Morris, Ltd.**

28-30 O'CONNELL ST.,  
SYDNEY.

CREEK STREET,  
BRISBANE.

95 QUEEN ST.,  
MELBOURNE.

UNION BANK CHAMBERS,  
WELLINGTON, N.Z.



# COMMERCIAL COPYING COMPANY

PHONE B 6403 (2 lines)

**MENDES CHAMBERS**  
8a CASTLEREAGH ST.  
SYDNEY

# PLANS REPRODUCED

**HELIOS**  
**BLUE PRINTS**  
**SEPIA PRINTS**

WE SPECIALISE IN COPYING  
**BLUE PRINTS, PENCIL DRAWINGS & DOCUMENTS**  
which cannot be reproduced by any other method

**TRACINGS MADE, PLANS AND MAPS MOUNTED**  
**DRAWING MATERIALS STOCKED**

# MAXWELL PORTER

## Slate and Tile Merchant, Slater and Tiler

Sole representative for the celebrated "DOONSIDE" Red, Brown, Buff, and Brindled Terra-Cotta ROOFING TILES - - (French Pattern)  
Every Description of ROOFING, and DAMP-COURSE SLATES, SLATING, TILING AND SHINGLING CARRIED OUT IN ANY PART of the STATE.

107 REDFERN STREET, REDFERN

Phone REDFERN 157



# BEAVER WALL BOARD

The only Wall Board made from virgin Spruce fibre through and through. Proof against heat, cold and sound. Sealed by patent Sealite process, and primed to produce an Art Finish Surface ready for decoration.

Wholesale Distributors in N.S.W.:

## ROSENFELD & CO. PTY., LTD.

Telephones City 283-4-5.

352 KENT STREET, SYDNEY

## The Ideal Material for Walls and Ceilings

For covering old plaster walls, or lining boards—for nailing to new studs—Beaver Wall Board is permanent, attractive and economical.

## Look for the Red Beaver Border

It is your guarantee of genuine  
**Beaver Wall Board.**

Tel. B 3873

# PLANS REPRODUCED

Established 1893

**BLUE PRINTS**

**BLACK AND WHITE PRINTS**

**SEPIA PRINTS**

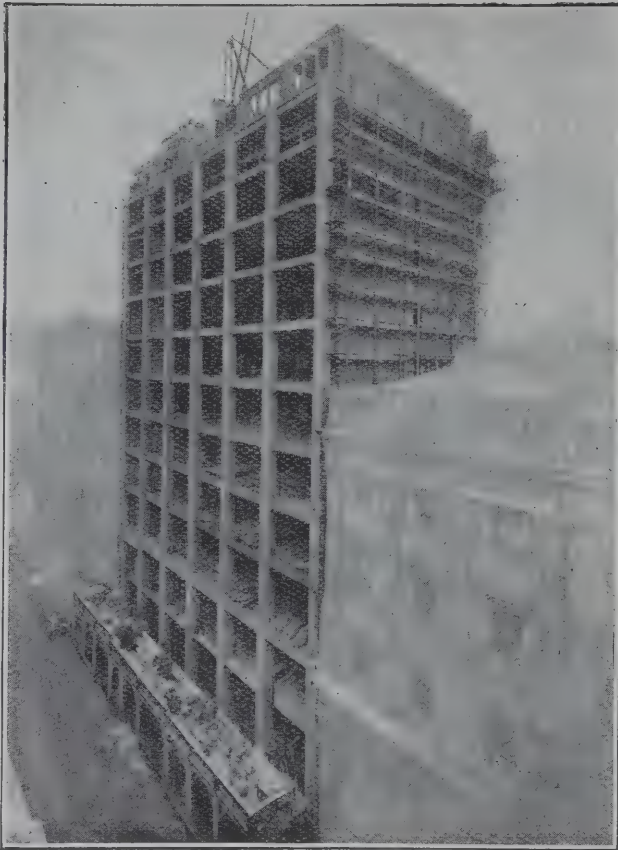
Tracings and Drawings of all descriptions Copied by either of the above Methods.

Drawings Accurately Traced if required.

Electric Light Printing a Speciality in any weather

**H. E. GARRAWAY**  
Rolyt Chambers, 13 Bridge St., Sydney  
Right Opposite Old Address

NOTE—For quick work, prints are dried by our Electric Heater in a few minutes



Only "UNION" Cement  
used in this fine structure



PORTION of New Premises  
for the Commercial Banking  
Company of Sydney, Ltd.,  
Sydney.

A striking example of modern  
reinforced concrete construction.

**The Commonwealth Portland  
Cement Co. Limited**

WORKS: PORTLAND, NEW SOUTH WALES  
OFFICE: 4 O'CONNELL STREET, SYDNEY

HEAD OFFICE & WORKS, MITCHAM, VIC

THE  
**AUSTRALIAN**  
**TESSELATED**  
**TILE CO.**  
PROP. LTD.

MANUFACTURERS  
OF  
PLAIN & DECORATIVE  
WALL & PAVEMENT  
**TILES.**  
**FAIENCE.**  
FIREPLACES, KERBS &  
IN RICH COLORS.  
**TERRACOTTA**  
DESIGNS PREPARED.

**E. E. WALKER,** MANAGING  
DIRECTOR

**W. G. WHITE,** SYDNEY REPRESENTATIVE  
39 PITT STREET



**"The House  
of Economy"**



# **ANTHONY HORDERNS'**

## **For every Christmas want**

**Here are three use-  
ful Lists:**



**Popular Presents  
and Toys**



**Grocery and Xmas  
Cheer**



**Books for Xmas**

**Write for Copies—they  
will be posted free.**

Your Christmas shopping should be a joy instead of the task it sometimes seems to be, if you do not know the golden rule of shopping contentment—which is to accomplish every commission, fill every requirement, with the same degree of satisfaction and economy, under one roof at Anthony Horderns'.

## **Anthony Hordern & Sons, Ltd.**

**BRICKFIELD HILL**  
Box 2712 G.P.O.

Situated in Block 14  
"Where Wisdom Shops"

**SYDNEY**  
Telephone: City 9440



*Perfection in Enamels*

# “ARTONA” ENAMEL PAINT

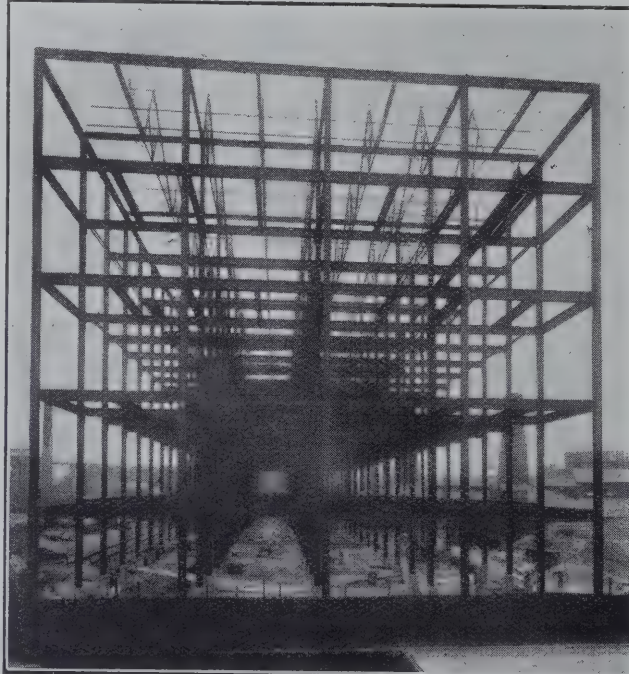
“Artona” Enamel is a high-grade product suitable for all surfaces, either interior or exterior. It flows well and works easily under the brush, drying hard to an extremely brilliant, durable finish, that will not chip, crack or blister.

Made in Australia by

**MAJOR BROS. & CO. LTD.**

Paint, Colour and Varnish Manufacturers

163 Clarence Street :: Sydney



*Steel Frame Building Manufactured and Erected by—*

## 6,000 TONS OF STEEL

SECTIONS, JOISTS and PLATES  
ALWAYS IN STOCK IN SYDNEY

STEEL FRAME BUILDINGS  
A SPECIALITY

ALL CLASSES OF STRUCTURAL  
STEELWORK UNDERTAKEN

ESTIMATES FREE

**DORMAN, LONG & CO. LTD.**

STEEL MANUFACTURERS

MIDDLESBROUGH, ENGLAND

**SYDNEY** { CITY OFFICE, DALTON HOUSE, PITT STREET  
**BRANCH** { PHONES: B 7457 and B 7458.  
TELEGRAMS: “GIRDERS,” SYDNEY

STOCKYARD AND WORKS: RALPH ST., ALEXANDRIA

**DORMAN, LONG & CO. LTD.**



# Specify STEEL SHELVING

and allow us to quote.

We Manufacture also—

**Fire Doors**

**Steel Roller Shutters**

**Steel Windows, and**

**Chemical Fire Extinguishers**

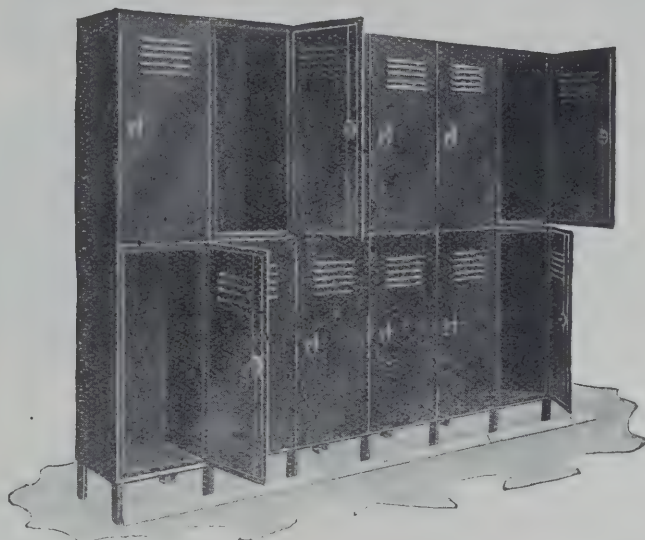
"SIMPLEX," "WATERLOO," and  
"PYROFOAM"

THE

**Grinnell Automatic Sprinkler  
and Fire Alarm System**

**Reduces Insurance Premiums  
nearly 50 per cent.**

**25,000 Fires Extinguished, average  
loss £60.**



## WORMALD BROS. LIMITED

PARK WORKS: YOUNG STREET, WATERLOO; and 4 BRIDGE STREET, SYDNEY (SHOWROOMS).

MELBOURNE—Bay Works, 180 Bay Street, Port Melbourne.

BRISBANE—Fitzroy Building, Adelaide Street.

ADELAIDE—Bower Building, Charles Street.

PERTH—Myslis & Horsfall, A.M.P. Chambers.

TASMANIA—L. H. Payne, 76 Collins Street, Hobart.

Evershed & Co., Launceston.

NEW ZEALAND—Arthur D. Riley & Co., Ltd., Wellington.

Auckland, Dunedin and Christchurch.

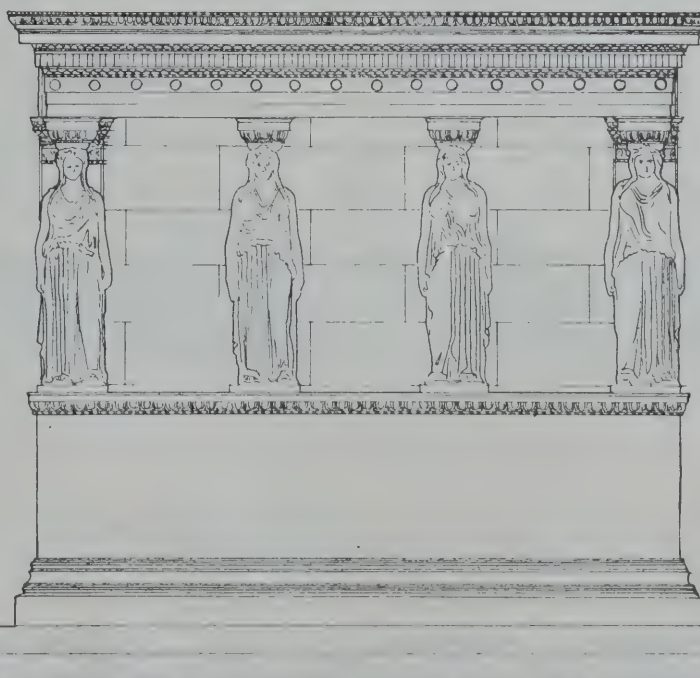
## ANSELM ODLING & SONS (AUSTRALASIA) LTD

### To ARCHITECTS

We specialize in  
working Shop  
and Office Fronts  
including Col-  
umns, Pilasters,  
etc.

We ask to be  
allowed to quote  
for work as per  
your plans and  
specifications.

We keep large  
stocks of Gran-  
ites all suitable  
for outdoor work  
which can be  
supplied slightly  
in advance of  
Tracyte rates.



### OUR GRANITES

Balmoral Red  
Emerald Pearl  
Blue Pearl  
Goulburn Grey  
Tarana Red

Samples can be  
supplied on ap-  
plication to our  
works at  
490-508

RILEY STREET  
SURRY HILLS  
nr. Cleveland St.

Tel. Red. 711

Also at  
Melbourne, Italy  
and London

# OXIDISING SEWAGE DISPOSAL (NON-SEPTIC)

## Montomerie Neilson Process for the Disposal of all House Waste.

A NECESSITY in every Home, Factory, or Works, which is not connected to sewerage. The Victorian Sewerage Board, which recently made a careful inspection in New South Wales, has declared that the **Neilson Oxidising System** has been proved to be the simplest, smallest, least expensive, most efficient, and free of all odours.

WHAT GOOD  
IS WEALTH  
WITHOUT  
HEALTH

As a result we have now completed the installation of an Oxidising System to meet the requirements of the City of Bendigo, 28,000 inhabitants.

The Inventor of the Oxidising Process is Montomerie Neilson, who thoroughly understands Sewage Disposal in all its problems, and will be pleased to advise you.

Associated with Mr. Neilson in the firm is Mr. H. Sanderson Edmunds, Ph. M.P.S., Analytical Chemist.

Particulars on Application to

## MONTGOMERIE NEILSON, EDMUNDS & COY.

DESK 17.

Head Office: 450 LITTLE COLLINS ST., MELBOURNE.

(J. T. EDMUNDS, Gen. Manager)

### BRANCH OFFICES:

NEW SOUTH WALES—Neilson Chambers, 87 Phillip St. Sydney.

S. QUEENSLAND—Evans, Deakin & Co., 121 Eagle St., Brisbane.

S. AUSTRALIA—Clifton Chambers, 22 Currie St., Adelaide.

N. QUEENSLAND—Roper & Moore, Flinders St., Townsville.

WEST AUSTRALIA—Kendenup House, 81 William St., Perth.

N.Z.—C. Temple Perkins & Co. Ltd., Maritime B'dgs., Wellington



Architects when specifying for "Home Decorations" will find lasting satisfaction in our Paint "Specialties."

**KEYSTONA** "Flat Finish" for Interiors.

**DEGRAH** A "Decorative" Wood Finish.

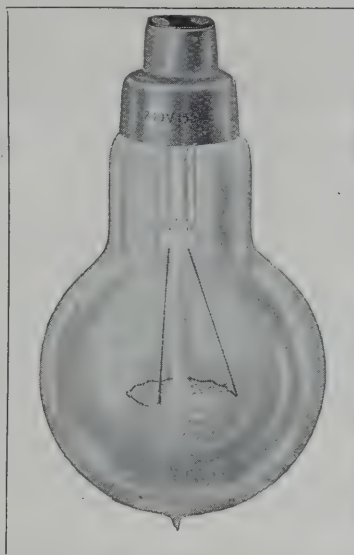
**ZINOLIN** "Non-poisonous" Pure Zinc Paint

**EDELVICE** "White Enamel" (will not turn yellow.)

**TYLORS (Water & Sanitary) LTD., 13 Bridge St., Sydney.**

Queensland Agents:—Messrs. Podmore & Hall, Adelaide Street, Brisbane





## Royal Edison Drawn Wire and Gasfilled Lamps

ARE BRITISH

## Royal "Ediswan" Fullolite Lamps

Opal Glass. Give soft even diffusion.  
For Home, Office and Professional Work. Compare with any other  
Lamp and note the advantage FULLOLITES offer.

## Ediswan Thermionic Valves

FOR DETECTING AND AMPLIFYING

We claim that our A.R.D.E. (Dull Emission) for absence of noise,  
sensitivity and amplifying power is superior to any  
valve at present on the market.



"EDDIE SWAN" can tell you all about any-  
thing in the Electric Incandescent Lamp Line.

# THE EDISON SWAN ELECTRIC CO. LIMITED

58 CLARENCE STREET, SYDNEY



## RUST-RESISTING SHEETS

Are Guaranteed to be 99.84% Pure Iron

Notwithstanding statements to the contrary the above guarantee still stands, and we challenge anyone to disprove it.

Architects, Engineers and Builders will realise, therefore, that as the Base Metal is Pure, and the Galvanising First Class, THE LIFE OF THE "ARMCO" SHEET MUST OF NECESSITY BE LONG.

Some makers say that they rely solely upon the galvanised coating for the life of the sheet.

We claim that the Pure Iron "Armco" Sheet will last long after the Galvanised Coating is gone.

**"ARMCO" IS IRON, NOT STEEL**

## ARMCO IRON AUSTRALIAN AGENCY

387 GEORGE STREET, SYDNEY

Victorian Branch: Union Buildings, Flinders St., MELBOURNE.  
S.A. Branch: Worando Buildings, Grenfell St., ADELAIDE.

Queensland Branch: Douglas Chambers, Adelaide St., BRISBANE.  
W.A. Branch: Wellington Buildings, William St., PERTH

Tasmanian Branch: 94 Liverpool Street, HOBART.

# Ruberoid

*Made in England*

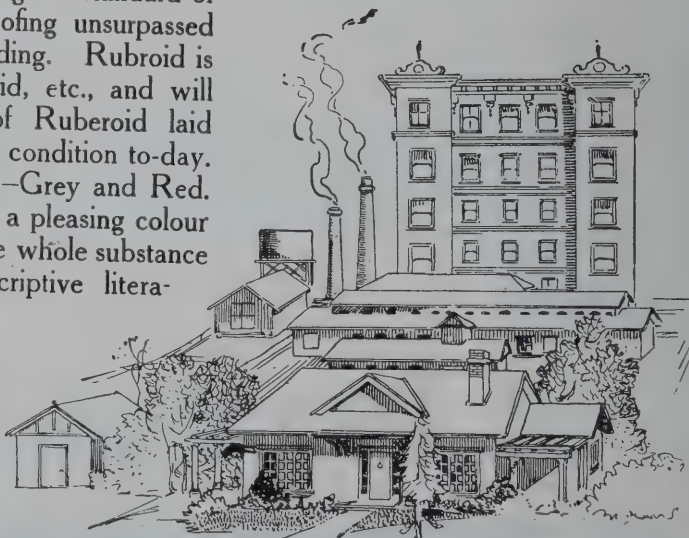
## ROOFING



RUBEROID ROOFING represents the highest standard of British manufacture. A permanent Roofing unsurpassed for Flat or Pitched Roofs on any type of building. Ruberoid is weatherproof, unaffected by the fumes of acid, etc., and will outlast any other roofing material. Roofs of Ruberoid laid down over twenty years ago are in excellent condition to-day. Ruberoid is made in two natural colourings—Grey and Red. The latter colour is particularly suitable where a pleasing colour effect is desired. The colouring impregnates the whole substance and will not fade. Write for samples, descriptive literature and price lists.

### AGENTS:

KINGLOC LTD. ...	CAMPERDOWN, SYDNEY
FREDC. ASH LTD. ...	NEWCASTLE
J. MURRAY MORE PTY. LTD. ...	MELBOURNE
A. W. SANDFORD LTD. ...	ADELAIDE
BURNS, PHILP & CO. LTD., TOWNSVILLE, CAIRNS & BOWEN	
HARRIS SCARFE & SANDOVERS LTD. ...	PERTH
JOHN REID & NEPHEWS ...	BRISBANE

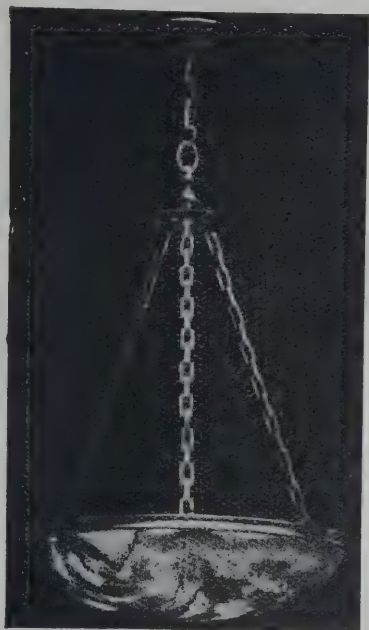




# HOLDSWORTH, MACPHERSON & CO.

WHOLESALE IRONMONGERS  
AND HARDWARE MERCHANTS

252 GEORGE STREET :: :: SYDNEY



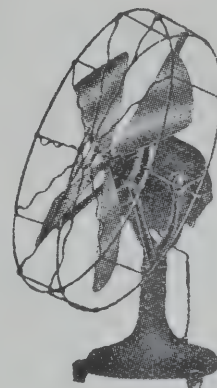
See our Show Room on First  
Floor at 252 GEORGE STREET

## ELECTRIC LIGHT FITTINGS a Speciality

JUST LANDED—A New and Complete  
Range of Indirect and Semi-Indirect  
**Hemispheres, Acorns and Balls**  
in **Alba and Jefferson Glass.**

Electric Irons, Toasters, Grillers, Kettles,  
Fans, and other up-to-date modern  
appliances for home comforts.  
Large stocks of accessories of every  
description.

**Conduit, Lamps, Shades, etc.**



HOLDSWORTH, MACPHERSON & CO.

## A distinct decorative scheme for each room of the home

Our wide selection of wallpapers makes it easy to choose a different design for each room. Whether it be a rich imitation leather for dining-room use, or a bright washable covering for the kitchen walls, selection is easy. In addition, our method of arranging designs in panels and friezes still further increases the available variety.

### *Write for this information*

Send to-day for a book of decorative suggestions, samples and particulars of prices. We will be glad, also, to furnish information about any paints you need—waterproof preparations, metal, wood and concrete preservatives, interior and exterior varnishes, flat paints, etc. Simply state your requirements.

**JAMES SANDY & COMPANY LIMITED**

326-328 GEORGE STREET, SYDNEY

'PHONE—CITY 9142-3-4-5

BRANCH AT 123 SCOTT STREET, NEWCASTLE

# PETRUCCO, DREELIN & GAMBLE

MARBLE AND TERRAZZO WORKERS AND PAVIORS

PAVINGS, STAIRS, DADO PANELLING  
NOSINGS, COUNTERS, TABLETS, ETC.

IN TERRAZZO, ORENITE AND MARBLE

MADDISON LANE, REDFERN

'PHONE: RED. 517

# THE JOKER

Lives up to its name. Can't be beaten. Made in seven different Models, from a Chip Heater to a Hot Water Service Heater. Prices range from £5 to £40

BROOMFIELDS LTD. 152 SUSSEX STREET, SYDNEY. Tel. City 9780

HYGIENIC

All Colours

WATERPROOF

FIREPROOF

All Designs

MAGNESITE



FLOORING

Will fulfil your most

MANCO FLOORING CO. LTD.

::

PHONE: Redfern 290

::

Exacting Requirements

77-79 Buckland St., Chippendale

# "PLASTO" THE SUPERFINE FIBROUS PLASTER SHEET

C. V. COBCROFT, London Bank Chambers, Sydney.

Phone B 1462

# PICTURES

# TALK

TELEPHONE  
— 3728 —

All classes of Blocks for Book, Catalogue or Artistic reproduction in Half-tone or Line. One, two or three color.

GEORGE WOODS, PROCESS ENGRAVER

495a GEORGE STREET :: :: SYDNEY



# What it Means to Buy Oils of Superiority



Are you sure that Oils you buy are 100% as represented, free from all impurities, and containing just those qualities you need to produce results measuring up to your high standard?

The surest, safest method is to order only those Linseed Oils that bear the label of **MEGGITT LIMITED**, whose reputation for Oils of superiority is your guarantee of quality.

All Oils may look alike—but the difference will be reflected in your finished products.

Why not profit by the experience of others?

**Australian  
Made**

## Meggitt Limited

HEAD OFFICE 26 KING ST SYDNEY (Works Parramatta)



*The boy on the bag  
guarantees quality.*



*The boy on the bag  
guarantees quality.*

# WUNDERLICH MANUFACTURES



## ART METAL CEILINGS

Artistic, Permanent, Economical.

Wunderlich Metal Roofing and Architectural Enrichments.

Metal Shop Fronts Show Cases and Counter Fronts.

Roofing Tiles Marseilles Pattern made at our Tileries.

Terra-Cotta Roofings Accessories and Garden Ornaments.

Asbestos Cement Building Sheets and Slates (Hydraulically Compressed.)

"Ceilyte" The Australian Plaster Board.

Ceilyte Ornamental Ceilings

"Adams," Jacobean and all period designs.

Particulars and Catalogues from the Manufacturers.

## WUNDERLICH LIMITED

*The Ceiling People*

Head Office & Works  
BAPTIST ST., REDFERN

Showrooms  
56 PITT ST., SYDNEY

Box 474, G.P.O. Phone 458 Red. (6 lines)

Sydney, Melbourne, Adelaide, Perth, Brisbane, Hobart,  
Launceston and Newcastle.



UNION HOUSE, SYDNEY  
"Simplex" Reversible Steel Windows  
throughout this building.

We Manufacture—

## Steel Window Frames

*of every  
description.*

Our "Simplex" Reversible Steel Windows overcome Window cleaning difficulty—both sides cleaned from within, in half the time—no risk—maximum of ventilation.

Wood Windows may be made on "Simplex" principle, we supply fittings.

*We invite your  
Enquiries*

## Dobson, Franks Ltd.

Head Office: 109 Pitt St., Sydney.

Works : : Alexandria, Sydney.

Representatives in — Melbourne, Adelaide, Brisbane, Perth.

# MELOCCO BROS.

*Ceramic, Enamel and Marble Mosaic for Floors, Walls and  
Ceiling Decorations.*

TERRAZZO and HERCULITE PAVEMENTS, STEPS, NOSINGS, Etc.  
Also ART FIBROUS CEILINGS.

BOOTH STREET, ANNANDALE

Telephone MW 1740

# LUXFER GLAZING

IS NOW MADE IN  
AUSTRALIA BY

BROOKS, ROBINSON & CO. Ltd., 59 & 65 Elizabeth St., Melbourne

LUXFER GLAZING IS A FIRE-RESISTING MATERIAL,

*And is accepted by the Underwriters' Association and City Architects.*

*We are pleased to submit Designs and Prices at all times.*

Sydney Agents: F. W. GISSING LTD., Wilson Street, Newtown.



# GOODLET & SMITH LTD.

TIMBER MERCHANTS

MANUFACTURERS



Joinery, Mouldings, Skirtings, etc. Stocks of all Timbers.

Terra Cotta Roofing Tiles

HEAD OFFICE  
SAW MILLS AND WHARF:

2 HARRIS STREET, SYDNEY

Telephones: City 9138, 9139, MW 2562, MW 2563

## ARCHITECTS AND ENGINEERS

can depend upon any Systems designed and carried out by this firm achieving the results aimed for, and affording complete satisfaction.

## Ventilation

Any problem involving the supply of fresh air or the removal of fouled air or treatment of air.

## Ventilating Fans

Made in all styles and types for every purpose, and to suit any need, and possessing highest possible volumetric efficiency.

Hot Water Supply.

Vacuum Cleaning Machines.

Heating Systems to Buildings.

Vacuum Cleaning Installations.

**GEORGE VINCENT,** INVINCIBLE FAN WORKS, OSWALD LANE,  
off WOOLCOTT STREET, DARLINGHURST.

Phone Wm. 1565

# Granolite Patent Paving Co.

Manufacturers of

Sole Layers of

**"Ironcrete" "Iron Slag Paving"**  
also **"Terrazzo Pavings"**

OFFICE AND WORKS: 15 FRANKLIN STREET, GLEBE.

TEL. M 1064

*Wilson's "Bell" Tiles*

EXPERT STAFF  
OF FIXERS  
CONSTANTLY  
EMPLOYED.

TERRA-COTTA

Red  
Buff  
Chocolate  
Mottled



Trade Mark (Regd.)

MARSEILLE PATTERN

Red  
Buff  
Chocolate  
Mottled

MASTER SLATERS,  
TILERS AND  
SHINGLERS.

36 ELIZABETH ST.

PADDINGTON

Phones: PADD. 1121--1122

**W. WILSON & COY. LTD.**

# STERLING EGG-SHELL-FLAT VARNISH

For First-Class Finish



DOES NOT MARK  
OR SHOW WHITE  
SCRATCHES



All Sterling Products  
are made under  
Personal Supervision

## WHY DELAY?

THE BORER & WHITE ANT  
WORK EVERY DAY

SAFEGUARD YOUR HOMES  
AND FURNITURE  
BY USING ..

**ANTI-BOR-ANT**  
DEATH TO ALL INSECTS

IT RENDERS  
TIMBER IMMUNE  
IS STAINLESS  
AND ECONOMICAL

We Guarantee  
to  
ERADICATE  
and Render  
all Timber  
IMMUNE

We Inspect  
Free of  
Charge

Write Dept. B

PHONE B 4455

THE  
SPECIFIC  
with a  
Government  
Certificate

ALSO AT  
MELBOURNE  
ADELAIDE  
PERTH

THE BORER & WHITE ANT EXTERMINATING Co. Ltd.  
CHALLIS HOUSE



# IRONITE stands for all that is best in FLOORS

*Guaranteed and Laid by*

HENRY HUGHES & CO. 23 ROSS ST., FOREST LODGE

Telephone: M 1586

## Art Glass Embossing

French Embossing :: Sand Blasting :: Ground  
Glass :: Advertising Signs :: Name Plates  
and all Glass Decorative Work, By an En-  
tirely New and Original Continental Process

DESIGNS AND SAMPLES SUBMITTED

**SKOVRONSKI BROS.**

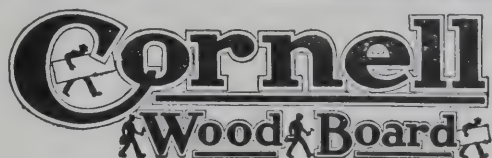
(Late A.I.F.)

52 RESERVOIR STREET, SYDNEY.

Off Elizabeth Street, near Central Station

TELEPHONES: M 3287;  
after 5.30 p m., Kog. 1343





**"CORNELL"—for Factories, Stores,  
Offices, and Public Buildings.**

**CORNELL-WOOD-BOARD** is daily solving the problem of high construction costs for Factories, Stores, Offices, Hotels, Theatres, Restaurants, Churches, Schools, Lodges, and other organizations.

**CORNELL-WOOD-BOARD** takes the place of lath and plaster for walls, ceilings and partitions. It cuts material and labour costs in remodelling and new work and makes possible pleasing, panelled interiors at small expense.

**CORNELL** is permanent—will not warp, crack or buckle if the simple directions are followed when applying.

**CORNELL'S** "Triple-Sized" process protects against moisture, expansion and contraction—it is fire-resisting and a splendid insulator against heat and cold.

**CORNELL'S** artistic "Oatmeal Finish" is admired by all—and its "Mill-Primed Surface" takes paint perfectly, saving the work and expense of a priming coat.

To obtain these valuable features insist on "**CORNELL**"—it costs nothing extra.

**A. C. SAXTON & SONS, LIMITED**  
**PYRMONT, SYDNEY : : : SOLE AGENTS.**

**John Ashwin & Co.**

Artists in  
Stained and Embossed  
Glass



DOMESTIC LEADLIGHTS AND PLAIN  
GLAZING OF ALL DESCRIPTIONS



31 Dixon Street :: Sydney  
OFF GOULBURN ST. NEAR TRADES HALL  
TELEPHONE CITY 3467

**WM. DOCKER'S**  
**FINEST EGGSHELL**  
**FLAT VARNISH**

For the interior decoration of Homes, Offices, Hospitals, Churches or wherever the soft Eggshell Finish is desired. **WM. DOCKER'S EGGSHELL FLAT VARNISH** imparts a rich, artistic finish that adds an air of charm and refinement wherever applied. It is extremely durable, and will not spot or show marks. Dries in 6 to 8 hours.

*Sold Everywhere*

**Wm. Docker Ltd.**  
**Makers of Fine Varnishes, Paints and**  
**Enamels.**  
**Sydney, Melbourne, Brisbane.**

# BUYERS' DIRECTORY

## ACCUMULATORS.

Western Electric Co. (Australia), Ltd., 192 Castlereagh Street.  
L. P. R. Bean & Co., Ltd., 229 Castlereagh Street.

## ARCHITECTS' REQUIREMENTS.

Anthony Hordern & Sons, Ltd., Brickfield Hill, Sydney.

## ART METAL WORK.

G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Wunderlich, Ltd., 56 Pitt Street.

## ASBESTOS CEMENT SHEETS AND SLATES.

James Hardie & Co., Ltd., "Asbestos House," corner York and Wynyard Streets, Sydney. (Fibrolite.)

## BATHROOM FITTINGS.

Anthony Hordern & Sons, Ltd., Brickfield Hill.  
Doulton & Co., Ltd., 193 Clarence Street.  
Lassetter & Co., Ltd., George Street.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## BEAVER BOARD.

Rosenfeld & Co. Pty., Ltd., 352 Kent Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## BELLS.

John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## BENT GLASS.

J. C. Goodwin & Co., Myrtle Street.

## BEVELLED MIRRORS.

J. C. Goodwin & Co., Myrtle Street.

## BITUMINOUS ROLL ROOFINGS.

James Hardie & Co., Ltd., "Asbestos House," corner York and Wynyard Streets, Sydney. ("Rexilite.")  
Wm. Adams & Co., Ltd., 175 Clarence Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.  
Kingloc Ltd., Camperdown, Sydney (Ruberoid).  
J. Murray More Pty., Ltd., Melbourne (Ruberoid).  
A. W. Sandford Ltd., Adelaide (Ruberoid).

## BRICK REINFORCEMENT.

Expanded Steel Products Co., 9 Martin Place, Sydney.

## CEMENT.

Commonwealth Portland Cement Co., Ltd., 4 O'Connell Street.  
Rosenfeld & Co. Pty., Ltd., 352 Kent Street.  
Kandos Cement Co., Ltd., 39 Hunter Street.

## CEILINGS, PARTITIONS AND WALL BOARDS.

James Hardie & Co., Ltd., "Asbestos House," Crnr. York and Wynyard Streets, Sydney.

## COMPRESSED FIBRE AND WOOD BOARDS.

James Hardie & Co., Ltd., "Asbestos House," Crnr. York and Wynyard Streets, Sydney.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## CONCRETE WATERPROOFING COMPOUNDS.

Expanded Steel Products Co., 9 Martin Place, Sydney.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## CONCRETE MACHINERY.

Expanded Steel Products Co., 9 Martin Place, Sydney.

## COLUMNS, PILASTERS, &c.

Wunderlich, Ltd., 56 Pitt Street.

## DAMP COURSE.

James Hardie & Co., Ltd., "Asbestos House," Crnr. York and Wynyard Streets, Sydney. ("Rexilite.")  
Maxwell Porter, 107 Redfern Street, Redfern.  
Wunderlich Ltd. (Certainteed), 56 Pitt Street.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## ELECTRIC FANS.

Australian General Electric Co., Ltd., Wentworth Avenue.  
Anthony Hordern & Sons, Ltd., Brickfield Hill.  
Dobson, Franks & Co., Ltd., 109 Pitt Street.  
Edison Swan Electric Co., Ltd., 58 Clarence Street.  
Western Electric Co. (Australia), Ltd., 192 Castlereagh Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## ELECTRIC LIGHT PLANTS AND INSTALLATION.

Australian General Electric Co., Ltd., Wentworth Avenue.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street.  
Western Electric Co. (Australia), Ltd., 192 Castlereagh Street.

## ELECTRICAL FITTINGS.

Australian General Electric Co., Ltd., Wentworth Avenue.  
Anthony Hordern & Sons, Ltd., Brickfield Hill.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street.  
Western Electric Co. (Australia), Ltd., 192 Castlereagh Street.

## FIBROUS PLASTER SHEETS.

James Hardie & Co., Ltd., "Asbestos House," Crnr. York and Wynyard Streets, Sydney.

## FIRE PROTECTION, FIRE DOORS.

Wormald Bros., Ltd., Young Street, Waterloo.

## FLOORING.

Manco Flooring Co., Ltd., 77-79 Buckland Street, Sydney.

## FURNITURE.

American Wall Bed Co., 380 George Street, Sydney.  
Anthony Hordern & Sons, Ltd., Brickfield Hill.

## GALVANISED IRON.

Armco Iron Co., 387 George Street.  
Anthony Hordern & Sons, Ltd., Brickfield Hill.  
John Lysaght (Australia), Ltd., 8 Spring Street.  
R. Johnson, Clapham & Morris, Ltd.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street.

## GATES AND FENCES.

Ornamental Steel Manufacturing Co., Ltd., 2 Castlereagh Street.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.

## GENERAL MOULDING.

G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Wunderlich, Ltd., 56 Pitt Street, Sydney.

## GLASS.

Brooks, Robinson & Co., Ltd., 59 & 65 Elizabeth Street, Melbourne.  
J. C. Goodwin & Co., Myrtle Street.

## GUTTERING AND RIDGING.

Armco Iron Co., 387 George Street.  
James Hardie & Co., Ltd., "Asbestos House," Crnr. York and Wynyard Streets, Sydney. (Asbestos Cement only.)  
John Lysaght (Australia), Ltd., 8 Spring Street.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street.

## HEATING AND HOT WATER SUPPLY.

George Vincent, Oswald Lane, off Woolcott Street, Darlinghurst.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street.

## INDENTED STEEL BARS.

Wm. Adams & Co., Ltd., 175 Clarence Street.

## INSURANCES AND FIRE PROTECTION.

Wormald Bros., 4 Bridge Street.

## INTERPHONES.

Western Electric Co. (Australia), Ltd., 192 Castlereagh Street.  
L. P. R. Bean & Co., Ltd., 229 Castlereagh Street.

## IRON WORKERS.

G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Ornamental Steel Manufacturing Co., Ltd., 2 Castlereagh Street.  
Wunderlich, Ltd., 56 Pitt Street.

## KITCHEN FURNISHINGS.

Anthony Hordern & Sons, Ltd., Brickfield Hill.

## LAUNDRY REQUISITES.

Anthony Hordern & Sons, Ltd., Brickfield Hill.

## LEADED LIGHTS.

J. C. Goodwin & Co., Myrtle Street.  
Sydney Glass File Co., Ltd., 496-504 Harris Street, Sydney.

## LIFTS.

Waygood-Otis (Aust.) Pty. Ltd., 9 Nithsdale Street, Sydney.  
Monarch Electric Motors Ltd., 4 Renwick Street, Redfern.



## LIGHTNING CONDUCTORS.

John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## MARBLE WORK.

Anthony Hordern & Sons, Ltd., Brickfield Hill.  
Anselm Olding & Sons, 506 Riley Street.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Holdsworth, Macpherson & Co., 252 George Street.  
Melocco Bros., 37 Parramatta Road, Forest Lodge.  
Petrucchio, Dreelin & Gamble, Maddison Lane, Redfern.  
Sydney Marble Terazzo Company, 12 Third Floor, Challis House,  
Martin Place, Sydney.

## METAL CEILINGS.

G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Ornamental Steel Co., Ltd., 2 Castlereagh Street.  
Wunderlich, Ltd., 56 Pitt Street.

## METAL GATES, FENCES, GUARDS, ETC.

James Hardie & Co., Ltd., "Asbestos House," Crnr. York and  
Wynyard Street, Sydney.

## METAL LATHINGS.

Expanded Steel Products Co., 9 Martin Place, Sydney.

## METAL STAMPING.

Wunderlich, Ltd., 56 Pitt Street.

## OIL ENGINES.

Western Electric Co. (Australia), Ltd., 192 Castlereagh Street.

## ORNAMENTAL GATES AND FENCES.

Ornamental Steel Manufacturing Co., Ltd., 2 Castlereagh Street.  
James Hardie & Co., Ltd., "Asbestos House," Crnr. York and  
Wynyard Street, Sydney.

## PAINTS AND PAINTERS' MATERIAL.

G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Detroit White Lead Works, Rhodes, near Sydney, N.S.W.  
James Hardie & Co., Ltd., "Asbestos House," Crnr. York and  
Wynyard Streets, Sydney. ("Fibro-C.")  
James Sandy & Co., Ltd., 326 George Street.  
L. A. Cormack, 4 Underwood Street.  
Lewis Berger & Sons, Ltd., Rhodes, near Sydney, N.S.W.  
Major Bros. & Co., Ltd., 163 Clarence St.  
Meggitt, Ltd., 26 King Street.  
Sterling Varnish Co., Bourke Road & Huntley Street, Alexandria.  
Wm. Docker, Ltd., 20 Young Street; with which is incorporated  
Robert Ingham Clark (Australasia), Ltd.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## PLAN COPYING AND REPRODUCING.

Alldritt & Alldritt, 117 Pitt Street.  
Commercial Copying Co., 8A Castlereagh Street.  
H. E. Garraway, 18 Bridge Street.

## POTTERY.

Maxwell Porter, 107 Redfern Street, Redfern.  
Wunderlich, Ltd., 56 Pitt Street.

## REINFORCING BARS (CONCRETE).

Expanded Steel Products Co., 9 Martin Place, Sydney.  
The Trussed Concrete Steel Co. (Australia), Ltd., York and  
Wynyard Streets, Sydney.

## "RIB" STEEL REINFORCING BARS.

The Trussed Concrete Steel Co. (Australia), Ltd., York and  
Wynyard Streets, Sydney.

## ROLLER SHUTTERS.

Wormald Bros., 4 Bridge Street.

## ROOFINGS.

G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
James Hardie & Co., Ltd., "Asbestos House," Crnr. York and  
Wynyard Street, Sydney.  
Lassetter & Co., Ltd., George Street.  
Maxwell Porter, 107 Redfern Street, Redfern.  
W. Wilson & Co., Ltd., 36 Elizabeth Street, Paddington.  
Wunderlich, Ltd., 56 Pitt Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## SANITARY FITTINGS.

Anthony Hordern & Sons, Ltd., Brickfield Hill.  
Armco Iron Australian Agency, 387 George Street.  
Doulton & Co., Ltd., 193 Clarence Street.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street.  
Tylors (Water and Sanitary), Ltd., 13 Bridge Street.

## SANITARY SYSTEMS.

Montgomerie-Nielson & Co., 87 Phillip Street.

## SHOP FRONT SPECIALITIES.

Wunderlich, Ltd., 56 Pitt Street.

## STEEL WINDOW FRAMES & FITTINGS.

G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Dobson, Franks, Ltd., 109 Pitt Street.  
Wormald Bros., Ltd., Young Street, Waterloo.

## STEEL REINFORCEMENTS (CONCRETE).

The Trussed Concrete Steel Co. (Australia), Ltd., York and  
Wynyard Streets, Sydney.  
Wm. Adams & Co., Ltd., 175 Clarence Street.

## STEEL WORK.

Expanded Steel & Concrete Products Co., 9 Martin Place, Sydney  
Ornamental Steel Co., Ltd., 2 Castlereagh Street.  
Wm. Adams & Co., Ltd., 175 Clarence Street.

## STOVES.

Anthony Hordern & Sons, Ltd., Brickfield Hill.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## TANKS.

Armco Iron Co., 387 George Street.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.

## TERRA-COTTA WARE.

Goodlet & Smith, Ltd., 2 Harris Street.  
Wunderlich, Ltd., 56 Pitt Street.  
W. Wilson & Co., Ltd., 36 Elizabeth Street, Paddington.  
Maxwell Porter, 107 Redfern Street, Redfern.

## TELEPHONES.

L. P. R. Bean & Co., Ltd., 229 Castlereagh Street.  
Western Electric Co. (Australia), Ltd., 192 Castlereagh Street.

## TIMBER.

Goodlet & Smith, Ltd., 2 Harris Street.

## TILES.

Australian Tessellated Tile Co. Pty., Ltd., 39 Pitt Street.  
Anthony Hordern & Sons, Ltd., Brickfield Hill.  
G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Goodlet & Smith, Ltd., 2 Harris Street.  
Maxwell Porter, 107 Redfern Street, Redfern.  
W. Wilson & Co., Ltd., 36 Elizabeth Street, Paddington.  
Wunderlich, Ltd., 56 Pitt Street.  
John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## VARNISHES.

Anthony Hordern & Sons, Ltd., Brickfield Hill.  
James Sandy & Co., 326 George Street.  
Lewis Berger & Sons, Ltd., 16 and 18 Young Street.  
Major Bros. & Co., Ltd., 163 Clarence St.  
Sterling Varnish Co., Bourke Road & Huntley Street, Alexandria.  
Wm. Docker, Ltd., 20 Young Street; with which is incorporated  
Robert Ingham Clark (Australasia), Ltd.

## VACUUM CLEANERS.

Australian General Electric Co., Ltd., "Mazda House," 35-45 Went-  
worth Avenue, Sydney.  
Western Electric Co. (Australia), Ltd., 192 Castlereagh Street.  
George Vincent, Oswald Lane, off Woolcott Street, Darlinghurst.

## 3-PLY VENEERS.

James Hardie & Co., Ltd., "Asbestos House," Corner York and  
Wynyard Streets, Sydney.

## VENTILATORS.

Wunderlich, Ltd., 56 Pitt Street.  
George Vincent, Oswald Lane, off Woolcott Street, Darlinghurst.

## WALL BEDS.

American Wall Bed Co., 380 George Street.

## WALL PAPERS.

Anthony Hordern & Sons, Ltd., Brickfield Hill.  
James Sandy & Co., 326 George Street.

## WHITE ANT EXTERMINATOR.

John Danks & Son Pty., Ltd., 324-330 Pitt Street, Sydney.

## WINDOWS.

Dobson, Franks, Ltd., 109 Pitt Street.

## WIRE GATES AND FENCES.

James Hardie & Co., Ltd., "Asbestos House," Corner York and  
Wynyard Streets, Sydney.

## ZINC WORK.

G. E. Crane & Sons, Ltd., 33-35 Pitt Street.  
Wunderlich, Ltd., 56 Pitt Street.

## Reinforced Concrete Construction



*Photograph showing New Additions to Premises for Messrs. Paterson, Laing & Bruce Ltd., Sydney.*

ARCHITECTS:  
Messrs.  
Power & Adam

CONTRACTORS:  
Messrs. Turner,  
Son and Loveridge

The whole of the Interior Constructional Work of these new additions was carried out in Reinforced Concrete on the Flat Slab System.

STEEL REINFORCEMENTS SUPPLIED BY

The TRUSSED CONCRETE STEEL Co. (Australia)  
"ASBESTOS HOUSE" Ltd.

Cor. YORK and WYNARD STS., SYDNEY  
CHAS. A. REED, M.C.I., Engineer

## Roofing!

Satisfaction to Architect and client alike is assured where "FIBROLITE" Asbestos Cement CORRUGATED ROOFING SHEETS are specified for roofing large industrial works, factories and stores "FIBROLITE" Corrugated Roofing is fire-retardant and proof against acid fumes, sea air, smoke, steam, etc. It cannot rust or corrode. It hardens with age and gives practically everlasting service with no maintenance costs.

*Write for Free Illustrated Catalogue*

JAMES HARDIE & COY. LTD.  
"ASBESTOS HOUSE"

Cor. YORK and WYNARD STS., SYDNEY

## "LYSAGHT'S"

GALVANIZED  
CORRUGATED IRON  
GALVANIZED PLAIN IRON  
AND  
C.R.C.A. BLACK SHEETS



Unrivalled for  
Quality, Durability, Uniformity & Finish

JOHN LYSAGHT (Australia) LIMITED  
SYDNEY, MELBOURNE, BRISBANE, ADELAIDE and PERTH.



# Paying its Passage



**W**HITE LEAD, imported into Australia, is worth no more here than it is in the land of its origin—but it costs the public more, for someone has to pay its passage across the ocean and the duty on it.

Berger's Genuine Australian Stack-made White Lead (corroded at Rhodes, N.S.W.) has been proved, by impartial tests, to be equally as good as any imported brand. It is a finely ground, stiff white lead, that possesses maximum covering capacity and opacity; breaks down easily, takes a full quota of linseed oil, and will not settle overnight. In addition it costs only what it is worth. You will save money, help an Australian industry, and secure just as good results by seeing to it that Berger's Genuine Australian Stack-made White Lead is always used.

*"It always pays to use Berbers"*

## CONTENTS, DECEMBER 15th, 1923

	PAGE		PAGE
I.A.N.S.W.—Minutes of an Ordinary General Meeting	174	Visit to Port Kembla...	183
"Travel Talk"—by J. S. Adam	175	Schedule of Wages as per Awards and Agreements	185
"Travel Talk" on Canada and America—by S. H. Buchanan	180	Sketching Competition for Architectural Students	186
		Institute Library	186

## INDEX TO ADVERTISEMENTS

	Page		Page
Adams, Wm. & Co.	xxvii	Garraway, H. E.	iii
Anderson, Wood, J. & Sons	xxix	Goodlet & Smith Ltd.	xv
Anselm Odling & Sons (Australasia Ltd.)	vii	Granolite Paving Co.	xv
Australian Tesselated Tile Co.	v	Hardie, Jas. & Coy. Ltd.	xx
Armco Iron Australian Agency	x	Harding, C. A. & Son	xxix
Ashwin, John, & Co. Ltd.	xvii	Henry Hughes & Co.	xvi
Australian General Electric Co.	—	Holdsworth, Macpherson & Co.	xi
Berger, Lewis & Sons (Australia) Ltd.	inside back cover	Hordern, Anthony & Sons. Ltd.	v
Brooks, Robinson & Co. Ltd.	xiv	Jefferies & Dunningham	xxix
Broomfields Ltd.	xii	Johnson, Clapham & Morris Ltd.	ii
Cement Mortars Limited	xxiii	Kandos Cement Co. Ltd.	xxxii
Crane, G. E., & Sons Ltd.	xxi	Kingloc Ltd.	x
Cobcroft, C. V.	xii	Lassetter's	Inside front cover
Commercial Copying Co.	iii	Loneon & Hocking	xxix
Commonwealth Portland Cement	iv	Lough & Shaw	xxix
Cormack, L. A.	xxiv	Lysaght, John (Australia) Ltd.,	xx
Danks, John & Son, Proprietary Ltd.	back cover	Manco Flooring Co.	xii
Dobson, Franks Ltd.	xiv	Meggitt Ltd.	xiii
Docker, Wm., & Co. Ltd.	xvii	Major Bros. & Co. Ltd.	vi
Dorman, Long & Co., Ltd.	vi	Melocco Bros.	xiv
Edison, Swan Electric Co. Ltd.	ix	Montgomerie-Neilson & Co.	viii
Expanded Steel & Concrete Products Co.	Inside front cover	Monarch Electric Motors Ltd.	xxx
		Ornamental Steel Mfg. Co. Ltd.	xxv
		Petrucce, Dreelin & Gamble	xii
		Porter, Maxwell	iii
		Rosenfeld & Co.	iii, xxxi
		Sandy, James & Co	xi
		Saxton, A. C. & Sons Ltd.	xvii
		Shaw, Pearson C.	xxix
		Shorter, John & Co. (Doulton)	—
		Skovronski Bros.	xvi
		Steel Products (Aust. Ltd.	xxiii
		Sterling Varnish Co.	xvi
		Swans Ltd.	ii
		Sydney Glass Co. Ltd.	xxiv
		The Borer and White Ant Exterminating Co. Ltd.	xvi
		The Trussed Concrete Steel Co. (Aust.) Ltd.	xx
		Taylor, J., & Sons, Ltd.	viii
		Vincent, George	xv
		Warnes, A. & Son	xxix
		Waygood-Otis (Aust.) Pty. Ltd.	xxix
		Western Electric Co. (Aust.) Ltd.	i
		Wilson, W. & Co. Ltd.	xv
		Wormald Bros. Ltd.	vii
		Wunderlich, Ltd.	xiv
		Woods, G	xii

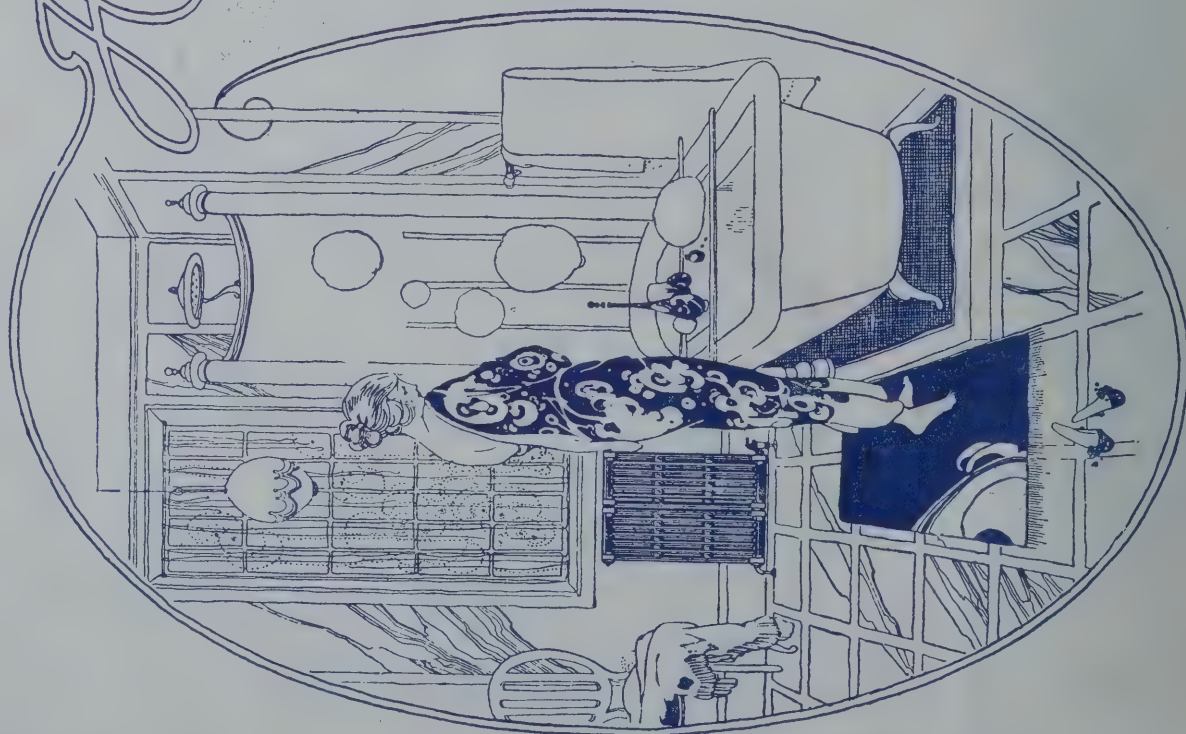
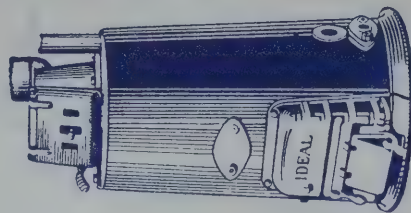
# IDEAL Hot Water Luxury

Hot Water as available as cold water; hot baths always ready; hot water for domestic use all day long; this luxury is now a necessity demanded by householders, tourists, travellers and students. Thanks to the

## IDEAL DOMESTIC BOILERS FOR HOT WATER SUPPLY

hot water can be made available at an extremely small upkeep for coke. Ideal Boilers raise 50 gallons of really hot water from 9lb. of coke—a hot bath for a penny.

They require little attention, fit snugly into any kitchen scheme, and are giving satisfaction and saving money in hundreds of homes, hotels, hospitals, colleges, clubs, cafes and sporting clubs. Architects' plans reticulated and prices for installations furnished. Write or call.



### JOHN DANKS & SON Pty Ltd

324-330 Pitt St. Sydney  
391-403 Bourke St. Melbourne





















UNIVERSITY OF ILLINOIS-URBANA



3 0112 057404391